FINAL REPORT

Oronogo–Duenweg Mining Belt Superfund Site, Phase 10

Jasper County, Missouri

Prepared for:

U.S. Environmental Protection Agency – Region 7
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EQM PN: 030319.0001

Contract Number EP-S7-15-06

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Attachments

ACRONYMS

Ac	Acre
ACOR	Alternate Contracting Officer Representative
Cd	cadmium
CDFR	Chemical Data Final Report
CO	Contracting Officer
COR	Contracting Officer Representative
CY	Cubic yard
DBA	Davis-Bacon Act
EQM	Environmental Quality Management, Inc.
GPS	global positioning system
HSO	Health & Safety Officer
LOD	Limit of Disturbance
MO	Missouri
MW	Mine Waste Area
NTP	Notice to Proceed
OU#1	Operable Unit #1
Pb	lead
PoP	Period of Performance
ppm	part per million
PWS	Performance Work Statement
QA	quality assurance
QC	quality control
ROD	Record of Decision
SOW	Scope of Work
USEPA	United States Environmental Protection Agency
XRF	X-ray fluorescence
Zn	zinc

1.0 Final Report

Environmental Quality Management, Inc. (EQM) has prepared this final report to summarize the scoped remedial activities completed in execution of the Performance Work Statement (PWS) of the contract documents. This report consists of this summary and three significant attachments (*Attachment A – Survey Data, Attachment B – Chemical Data, and Attachment C – Safety & Health Phase-out Report*).

2.0 Project Contract

The United States Environmental Protection Agency, Region 7, (USEPA) awarded contract number EP-S7-15-06 to EQM on August 25, 2015 for the Oronogo-Duenweg Mining Belt Site Operable Unit 01 (OU #01) - Phase 10 project. The format of the project's period of performance (PoP) was one base year followed by four optional years. The original contract amount was $31,887,651.60. USEPA issued EQM a notice to proceed (NTP) on October 29, 2015. USEPA extended the contract to include the four optional years upon the expiration of each subsequent year. EQM concluded field operations in November 2020, prior to the expiration of the final PoP of November 15, 2020. USEPA issued a total of 49 contract modifications to EQM over the duration of the contract, revising it as necessary for newly scoped tasks, unforeseen conditions, work stoppages and adjustments of the contract quantities, performance period, and changes of key personnel.

3.0 Project Location & Scope

The Oronogo-Duenweg Mining Belt Site Operable Unit 01 (OU #01) - Phase 10 project was located in metropolitan area in and around Joplin, Missouri and included properties that were in Jasper and Newton Counties. The selected remedy consisted of excavation, hauling, and consolidation of mine waste (i.e., mainly chat and bull rock), and underlying soils contaminated

with heavy metals, that remained on the surface at 41 different sites within OU#01. The mine waste and contaminated soils were hauled to and consolidated to specific repository areas. For this remedial action and report, the term mine waste includes both mine waste and underlying contaminated soil with heavy metal concentrations greater than the cleanup goals (400 parts per million (ppm) for lead, 40 ppm for cadmium, and 6,400 ppm for zinc). The remedy also included:

- installing temporary erosion controls (silt fence, straw bales/wattles);
- clearing & grubbing of trees and shrubs;
- filling open mine shafts and subsidence pits with mine waste;
- capping the mine waste repositories with clay and topsoil;
- grading the disturbed areas of each mine waste area to promote drainage;
- re-vegetating the disturbed areas with grass seed via a combination of techniques (hydroseeding, broadcast spreading and seed drilling);
- constructing detention, retention basins, drainage swales, rip-rap check dams and channels for proper stormwater management; and,
- and installation of new, replacement fencing.

EQM conducted post-excavation and post-restoration surveys of the sites to document the final condition of each site. All remedial activities were conducted in accordance with the final plans and specifications developed during the remedial design and the EPA Superfund Record of OU-1 Decision (ROD) issued September 30, 2004.

In total, EQM excavated approximately 3.3 million cubic yards of mine waste from 41 mine waste areas and hauled it to various repositories, some onsite and some offsite, as authorized by USEPA's Contracting Officer Representative (COR). To verify the remedial action objectives were attained in each area, EQM collected 3,624 soil samples from the post-excavation surface soils and analyzed those samples using X-ray fluorescence (XRF) technology. Table 1 below identifies the 41 mine waste areas remediated and their limits of disturbance (LODs) in acres. The original LOD for each area was provided by the USEPA's design engineer (Black & Veatch) and represented the pre-remediation condition of each mine waste area based on their previous site investigation. The original LODs were provided to EQM as part of the contract documents. Additionally, USEPA provided original surface profiles (LIDAR) as the

pre-remedial survey for each area. EQM's survey subcontractor (Anderson Engineering, Joplin, MO) developed the final LODs based on the total area after completing a final survey in each area. EQM adjusted the depth and horizontal limits of the excavations based on actual field conditions (i.e., both visual inspections and XRF results). Volume calculations used the LIDAR data provided by USEPA as baselines. *Attachment A – Survey Data* contains site figures, maps and surveys generated by Anderson Engineering during this project. The surveys depict the final LODs; additionally, Anderson Engineering provided the volume calculations and drawings of pre-excavation grades & contours, post-excavation grades & contours, 10,000 sft grids established by EQM for confirmation sampling and post-restoration/as-built drawings for each of these mine waste areas.

EQM has included details describing the confirmation field sampling events and the XRF analytical data of the confirmation samples from the mine waste areas in *Attachment B – Chemical Data*. EQM has also included the quality control analytical data of the imported soils used as backfill in *Attachment B – Chemical Data.* In *Attachment C – Safety & Health Phase-out Report*, EQM has included a description of the incidents, accidents and injuries that occurred during the execution of the contract as well as a summary of the air monitoring/employee exposure monitoring program that EQM conducted. A description of the procedure that EQM implemented to decontaminate the heavy equipment used is also included.

4.0 Project Areas & Totals

Table 1 identifies the Mine Waste areas remediated by EQM, the volume of mine waste excavated, original LODs and final LODs of each area. Volumes were determined by Anderson Engineering through a comparison of the pre-excavation and post-excavation survey data. Table 2 summarizes EQM's project totals for each of the specific contract line items through each of base and option year periods.

Table 1 – Mine Waste Areas remediated in Phase 10

Area	Volume of Mine Waste (cyd), actual	Volume of Mine Waste (cyd), per design	Original LOD (Ac)	Final LOD (Ac)
Base Area 1	123,844	No data provided/available	38.6	38.8
Base Area 2	20,242	No data provided/available	5.6	5.2
Base Area 3	12,301	No data provided/available	7.9	4.7
Base Area 4	29,138	No data provided/available	9.1	8.8
Base Area 6	76,246	No data provided/available	14.5	12.1
Base Area 8	133,625	No data provided/available	27.7	22.9
Base Area 11	1,234	No data provided/available	6	4.6
Base Area 13	69,102	No data provided/available	13.2	9.3
Base Area 14	19,951	No data provided/available	3.9	3.1
Base Area 15	68,189	No data provided/available	30.8	11.8
Opt. 1 Area 1	166,064	No data provided/available	35.4	30.1
Opt. 1 Area 2	111,277	No data provided/available	19	14.7
Opt. 1 Area 3	68,858	No data provided/available	21.4	19
Opt. 1 Area 6	48,035	No data provided/available	14.7	15.2
Opt. 1 Area 9	20,015	No data provided/available	4.6	5.2
Opt. 1 Area 15	10,885	No data provided/available	1.9	2
Opt. 1 Area 20	54,227	No data provided/available	3.6	7.8
Opt. 2 Area 1	197,182	No data provided/available	61.64	42.83
Opt. 2 Area 3	119,302	No data provided/available	17.8	29.4
Opt. 2 Area 5	36,144	No data provided/available	8.4	7
Opt 2-6	674,502	No data provided/available		
Opt. 2 Area 6 -	41,490	No data provided/available	146.9	94.1
Opt. 2 Area 6 -	116,507	No data provided/available	146.9	16.7
Opt. 2 Area 6 - West	228,304	No data provided/available	25.4	39.7
Opt. 2 Area 7	155,965	No data provided/available		24.3
Opt. 2 Area 8	67,977	No data provided/available	12.8	36.7
Opt. 2 Area 9	4,527	No data provided/available	n/a	2.4
MW-09	119,630	131,000	90.2	34.15
MW-14-01_02	120,311	78,000 (MW 14)	44.61	26.99
MW 14-03_04	4,147	Included above		2.5
MW-18-01_02	165,397	92,000 (MW 18)	56.96	39.93
MW-19-01_02	100,510	73,000 (MW 19-1, 2 & 3)	23.04	23.1
MW-19-03	34,466	Included above	2	9.48
MW-25	8,572	50,000		2.9
MW-26-01	96,420	198,000 (MW 26-1, 4 & 5)	37.1	27.67
MW-26-04	10,617	Included above	2.14	2.1
MW-26-05	37,852	Included above	8.97	10.39
CCC Church	612	No data provided/available	N/A	0.22
Totals	3,373,667		942.76	614.45

Table 2 – Project Totals								
CLIN	Description	Unit	Base	Option 1	Option 2	Option 3	Option 4	**Project Totals**
X001	**Erosion Control**							
X001AA	Sediment Fence	LF	454	1,812	570	2,150	3,271	**8,257**
X001AB	Rip Rap	Ton	654	2,000	915	2,461	276	**6,306**
X001AC	Stabilized Construction Entrance	Ea	5	6	6	4	4	**25**
X002	Clearing and Grubbing	Acre	176	68	160	239	24	**667**
X003	**Earthwork**							
X003AA	Excavation/Disposal of Contaminated Waste	CY	493,685	586,929	982,379	794,100	516,574	**3,337,667**
X003AB	Placement of material for Drainage	CY	10,949	100,000	96,721	131,700	127,040	**466,410**
X003AC	Grade Excavated Areas to final grade	Acre	134	118	160	239	24	**676**
X003AD	Import/Place Clay for all Repository Caps	CY	14,150	100,996	48,810	41,143	138,882	**343,981**
X003AE	Import/Place Topsoil for all Repository Caps	CY	4,000	28,997	5,000	8,067	58,770	**104,834**
3004	**Seeding/Fertilizing**							
X004AA	Seeding/Fertilizing Repositories	Acre	5	10	1	0	61	77
X004AB	Seeding/Fertilizing (Fescue)	Acre	74	118	92	166	297	**747**
X005	Remove/Replace Fencing	LF	5,000	7,497	5,370	10,021	20,588	**48,476**
X006	Supply/Install 24" CMP Pipe	LF	80	0	164	26	40	**310**
X007	Supply/Install 36" CMP Pipe	LF	60	0	55	5	460	**580**
X010	Rip Rap, 12"-36"	Ton	0	0	0	681	2,981	**3,662**
X011	Crushed Rock, 3" Clean	Ton	0	0	0	570	1,636	**2,206**
X012	Gravel, 1-3" Crushed w/fines	Ton	0	0	0	5,407	1,896	**7,303**
X014	Tire Disposal	Ton	0	0	0	45	3	**48**

4.1 Mine Shafts

The following table identifies the mine shafts that EQM encountered during the project:

Point #	Location, decimal degrees	Elevation	Site Location
4071	340368.816, 2772623.959	967.172	Area 2-6
4072	340339.582, 2772356.573	965.268	Area 2-6
4151	340965.397, 2772724.273	953.212	Area 2-6
4153	341329.627, 2773206.385	945.271	Area 2-6
4336	345744.650, 2765040.603	870.03	Area 1-15
5636	344476.689, 2771100.884	909.062	Area 2-7
5637	344346.973, 2771133.370	911.473	Area 2-7
5638	344069.099, 2771006.625	916.667	Area 2-7
5639	344161.796, 2771011.354	915.697	Area 2-7
5640	344292.173, 2771353.486	930.079	Area 2-7
8048	340233.815, 2773242.183	978.923	Area 2-6
10736	335814.017, 2754376.300	929.016	
10737	335738.940, 2754422.830	919.153	
12134	336002.560, 2754514.243	942.239	
14179	346823.583, 2780183.514	938.688	MW19-1
14180	346756.377, 2780193.515	936.724	MW19-1
14181	346731.224, 2780089.703	945.591	MW19-1
14182	346731.470, 2780089.916	945.755	MW19-1
14183	346583.461, 2779689.604	938.494	MW19-1
14184	346652.244, 2779647.443	933.046	MW19-1
14185	346702.232, 2779715.752	937.062	MW19-1
14186	346710.945, 2779755.299	937.964	MW19-1
14187	346646.756, 2779796.346	942.528	MW19-1

4.2 Parcels where mine waste remains

The following table identifies the parcels and parcel owners for those properties that mine waste was not completely removed from per the direction of the property owner:

Table 3 – Parcels where mine waste remains

Mine Waste Area	Parcel ID	Property Owner	Contact Information
Area 1 Base	17703600000006000	Ross Family Trust	No info available
Area 8 Base	17702500000032028	Christopher Farris	1106 E Windsor Joplin Mo 64801
Area 7 Base	17702500000033000 17702500000031000	Vearl Starchman Wanda McCorkle & Ralph Barger	5594 West Emerald Rd. Joplin Mo 64801 6028 W Ebony Joplin, MO 64801
Area 2-6 Larry Wald	16903200000001001	Larry Wald	[redacted]
MW-18	16502100000001000	Paul & Shirley Eddy	[redacted]
Option 1 area 10	17702500000049001	Steve Nelson	[redacted]
Option 1 Area 11	17702500000003000	Blue Shutter Investments	No info on file
Option 1 Area 12	17702500000042000	Brandy Goforth	3742 N Central City Road Joplin Mo
Option 1 Area 13	17702500000038000	Johnny and Argie Mathis	3586 N Central City Rd. Joplin Mo 64801
Option 1 Area 14	16903000000010000	Mark & Tammy Struwe	5415 W Belle Terrace Ln. Joplin Mo 64801
Option 1 Area 16,17,19	16903000000010001	Crum TR	5357 Belle Terrace Ln Joplin Mo 64801

5.0 Project Costs

The following project costs were expended by USEPA in the base contract and four optional periods:

Table 4 – Project Costs

Contract Period	Amount
Base	$3,685,978.44
Option 1	$5,973,773.30
Option 2	$7,768,005.60
Option 3	$7,087,895.55
Option 4	$9,894,071.57*
Total	**$34,409,724.46**

**Assumes pending payout of both incentives*

The final contract amount expended was $34,409,724.46; whereas, the original was $31,887,658.60, an increase of $2,522,065.86.

6.0 Key Personnel

This contract was executed by the following EQM staff in the key roles identified below:

Table 5 –EQM Personnel & Roles

Role/Position	Employee	Effective Dates of Project Involvement
Project Manager	[redacted]	1/1/15 – 1/15/17
Project Manager	[redacted]	1/16/17 – 11/15/2020
Site Superintendent	[redacted]	1/1/15 – 11/15/2020
QC Manager/HSO	[redacted]	1/1/15 – 1/1/15
Interim QC Manager/HSO	[redacted]	1/1/18 – 11/15/2020

EQM's personnel worked a total of 233,824 man-hours over the entire duration of the contract; Table 5 identifies the man-hours expended per calendar year.

Table 6 – Total EQM Man-hours

Calendar Year	Total Man-hours (both DBA & non-DBA)
2015	559
2016	42,165
2017	60,600
2018	55,023
2019	52,080
2020	23,397
Total	**233,824**

EQM's craft personnel, subject to Davis-Bacon Wages (DBA), worked a total of 208,133 man-hours; total hours per each DBA classification are identified below:

Table 7 – DBA Man-hours

Labor Category	Total Hours
Equipment Operator	88,369
Truck Driver	108,668
Laborer	11,096
Total	**208,133**

Key USEPA personnel assigned to oversight roles on this contract include:

Role	USEPA Personnel
Contracting Officer (CO)	Jack Peterson/Koni Fritz
Contracting Officer's Representative (COR)	Mark Doolan/Steve Kemp
Alternate Contracting Officer's Representative (ACOR)	Todd Campbell/Liz Hagenmaier

7.0 Repositories Utilized

EQM used ten different repositories to consolidate the mine waste from all the sites. Some new repositories were included in the pre-remedial design documents whereas others were developed as the result of field conditions; however, the majority of the mine waste was consolidated at the Gystack Repository. The need for, and exact locations, of new repositories were identified by EQM after consulting with the individual property owner; each was also authorized/approved for use by the COR. EQM also filled open mine shafts that were present in the work zones with mine waste; however, EQM did not track the volume of mine waste placed in shafts separately from the final cut volume/calculation.

The table below detailed the repositories that EQM used with an estimate of the mine waste placed in each based on field tracking of truck counts and average payloads:

Table 8 – Repositories

Repository	Mine Waste – estimated volume placed, (cubic yards)	New or Existing
Balestrin Repository	10,682	New (authorized by COR)
Area 1-6	21,642	New (authorized by COR)
Area 2-8	67,977	New (authorized by COR)
Area 2-9	4,527	New (authorized by COR)
Area 11	1,234	New (included in design)
Central City Fireworks	8,562	New (authorized by COR)
MW 19-1	35,000	New (included in design)
MW 26-1	28,420	New (included in design)
Snowball	515,571	New (authorized by COR)
Gypstack	2,596,695	Existing

Maps identifying the location and size of these repositories are included in *Attachment A - Survey Data*; the maps illustrate the overall shape and design, as well as volumes of clay and

topsoil that EQM placed as cover materials over the repositories. Please note that EQM did not construct a cover, consisting on clay cap and revegetation, over the Gypstack Repository since it remains active beyond the scope of work for this contract.

All these repositories with the exception of MW 19-1, MW 26-1, and Partial Snowball were approved per COR (Mark Doolan). Snowball was initially approved as a repository by COR Doolan and later expanded upon as authorized by Steve Kemp, who replaced Mark Doolan as COR. The MW 19-1 repository used was in the Black and Veatch design set, with its expansion approved by COR (Kemp) as well as the repository contained on MW 26-1.

8.0 Fill Materials

EQM obtained clay and topsoil from multiple off-sit borrow areas/sources during the execution of the fieldwork:

- Wildwood Ranch, Junction of 20th & Malang Road, Joplin, MO;
- Wildwood Ranch, Junction of 20th & Central City Road, Joplin, MO;
- Schuber Mitchell, Junction of 7th Street and Chesterfield Drive, Webb City, MO; and,
- Ray Schmidt, Fir Road & P Highway, Joplin, MO.

Data on the chemical and physical properties of the fill materials obtained from each borrow source identified above is included in Appendix D.

Backfill clay and clay capping material was taken from on-site sources usually same parcel. EQM didn't send off samples of this material due to the fact available material on or off site, being very rocky, usually would not meet spec. The material was field tested daily to confirm all levels of lead, zinc and cadmium were below action levels for the contract. This method for clay backfill had verbal consent from former COR Mark Doolan and had been discussed with replacement COR Steve Kemp and assistant Todd Campbell.

9.0 Notable Deviations from Contract Design/Specifications

It was determined through field testing efforts that many sites within this contract had mine waste and contaminated soils extending past the original Limits of Detection (LODs) set forth in the contract documents (i.e., Black and Veatch Design set). EQM often sought and received authorization from the COR to "chase" after this mine waste. In particular, Area 2-6 North, also known as Dogwood Lane, the original drawings show a clear depiction of mine waste excavated outside the original contract design. The original design set had limits set to just short of Pump Lane. After excavating up to this point, EQM was authorized by the COR to continue removing mine waste from Pump Lane to the north, crossing Dogwood Lane, leading to Turkey Creek. The area originally had a very small LOD around an old railroad bridge, less than 1 acre, located to the north of Pump lane, along an easement for Liberty Power. This excavated area grew in size from the 1 acre to 16.72 acres. This involved the entire valley being excavated to the north across Dogwood Lane along waterway which ran parallel the rail bed and accumulated chat and other contaminated sediment. EQM excavated approximately 116,500 cubic yards of mine waste and encountered mine waste to a depth of 10-12 feet below ground surface.

9.1 Contract Modifications involving additional Scope/Services

EQM completed several tasks that deviated from the original scope of work but were necessary to more completely fulfill the intent of the original contract. These additional tasks were:

- Porter Estates Trailer Demolition
  EQM received contract modification P00030, on 2/15/19, for the demolition and debris disposal of 25 derelict house-trailers located on Mr. Ron Porter's property within MW Area 2-3. This work was necessary to access & remove the existing mine waste underneath the trailers. Approximately 25 tons of demolition debris was disposed of at the local disposal facility. EQM coordinated our efforts in conjunction with USEPA, Missouri Department of Natural Resources and Jasper County Health Department. The unsanitary general site conditions (i.e., lack of running water, electrical power, & improper sanitation) of the trailers posed health and safety risks to EQM personnel

working on-site such as exposure to sharps (i.e., needles from drug use) and biologicals (i.e., coliform due to potential presence on human fecal matter, vermin due to the open presence of garbage and food waste, lice due to unclean living environment). The demolition work and subsequent mine waste excavation was completed in August 2019. Total additional cost $87,500.00.

- Gystack Repository Repairs
  EQM received contract modification P00015, on 10/20/2017, for the repairs of erosion and construction of a retention basin for stormwater at the Gystack Repository located off Malang Street. Work was completed in November 2017. Total additional cost was $28,738.90.

- Gystack Repository Regrading
  EQM received contract modification P00036, for the regrading of approximately 258,000 cy of mine waste at Gystack Repository and install drainage swales/features. EQM's scope of work did not include placement of clay, topsoil or revegetation at Gypstack since it remains an active repository. Work was completed in February 2020. Total additional cost was $1,254,999.81.

- Construction of Box Culvert at Dogwood Lane
  EQM received contract modification P00041 on 04/03/2020 for the construction of a concrete box culvert and associated roadbed work at Dogwood Lane as part of Option Year 4 for $289,349.72. Work was completed in October 2020.

- Hauling & Spreading of Wood Chips
  EQM acquired wood chips from the City of Joplin and spread the wood chips on select areas of restored mine waste areas to increase the organic content of the surface soils and promote the establishment of vegetation. This was done on a limited, trial basis to evaluate if the wood chips increased the establishment/vitality of grass.

- Disposal of Waste Tires
  In response to discovery of numerous waste tires, (illegal dumped), within the mine waste areas, USEPA added a line item for tire disposal to EQM's contract during Option 3. EQM disposed of 45 tons of tires in Option 3 and 3 tons in Option 4 at local facility permitted to accept tires. Total additional cost was $7,896.00.

- Relocation of Utility Lines

  EQM was required to relocate three separate sections of above-ground power poles (Area 2-6/McDonald Property, Dogwood Lane and MW-09 Carl Junction) and one underground AT&T phone line (Area 2-6) in order to completely excavate the mine waste from those areas. Total additional cost was $219,319.98. Table 8 identifies additional detail regarding each activity:

Table 9 – Utility Relocations

Mine Waste Area	Item	Cost	Magnitude/Extent	Execution Time[1]
Area 2-6/ McDonald	Utility line, aboveground (Liberty)	$65,909.98	approx. 2,300 lft	9 months
Area 2-6 Dogwood	Utility line, aboveground (Liberty)	$117,933.54	17 poles	20 months
MW-09	Utility line, aboveground (Liberty)	$14,546.05	5 poles	9 months
Area 2-6	Underground Phone Line (AT&T)	$20,930.41	3,026 lft of new line	5 months

[1]time elapsed from solicitation of quotes/proposal through billing cycle and close-out

- Remedial activities with floodplain – MW-09

  MW-09 had a large open water filled mine pit which butted against east side of County Road JJ. It could pose danger to passing traffic or pedestrians who may venture into the north bound road ditch area as the property owner had pointed out. During this conversation with the Mr. Gerald Hudson, the owner, we discussed disposing of excavated mine waste in this pit due to its close proximity and the fact it's where it came from to begin with. After some thought Mr. Hudson decided some fill would be fine but wanted minimal impact on the "pond". He allowed EQM to deposit waste across the west end of the pit building a north/south buffer between the roadway and water. This would put a safer space between the roadway and the water to allow for easier access during mowing and would generally clean up the swampy eyesore at that end of mine pit. Mr. Hudson stated after the buffer was built, he would likely plant grass and trees to restrict visibility of his equipment yard from the roadway. EQM's Site Superintendent, Jason Smith, received verbal approval from USEPA COR, Steve Kemp, to place mine waste in this manner. EQM deposited approximately 119,000 cubic yards into the mine pit. The fill operation came to the attention of Jasper County Flood Plain Management,

represented by Mr. Clayton Cristy. After meeting Mr. Cristy onsite, he raised concern and identified the need for an elevation of the potential impact on the floodplain. EQM contacted Anderson Engineering Inc. (Anderson) for an evaluation of the fill and surrounding Center Creek area. On June 7 2019, EQM received a no-rise certification from Anderson stating the improvements completed during the EPA cleanup did not show an increase in the 100-Y (1% AEP) flood elevation. EQM provided a copy to the Jasper County Flood Plain Management and no further action was required.

- Pederson Property

  Mr. Pederson's property was part of the contract areas of Option 1 of Phase 10. During the cleanup efforts, Mr. Pederson was very concerned about damage to surrounding vegetation (woods) as well as being somewhat reluctant about the cleanup in general. EQM was able to remove the mine waste with minimal damage to the area. A portion of LOD was located across Turkey Creek to north of Mr. Pederson's property. Mr. Pederson granted EQM permission to access that portion of the LOD and to travel across his property with mine waste using off-road dump trucks. A rip rap crossing was built across streambed allowing water to flow as off-road trucks crossed. Mr. Pederson liked the addition of the crossing and EQM left it in place when work was done per Mr. Pederson's request. He mentioned that he particularly liked the shallow pool created upstream as well as giving him access to small piece of his parcel across the stream.

  This later became an issue when Mr. Pederson decided he did not like the crossing after work was done by EQM on another contract for HGL

  Under a separate contract, EQM performed work for HydroGeoLogic Inc. (HGL) installing a designed creek bank stabilization system as a pilot study, on that very portion of Turkey Creek, just downstream from the crossing on Mr. Pederson's property. This contract made use of existing creek bank material which had been excavated and processed to create a suitable material for stair stepping the bank back while wrapping each step in coconut coir and inserting live stakes of Black Willow, Silky Dogwood and Buttonbush. All areas disturbed were seeded and watered daily for a period to establish growth. During this process Mr. Pederson's entire property was seeded either under the HGL contract or under the concurrent Phase 10 contract depending which the acreage fell under. During the performance of the HGL contract, the area suffered from multiple flood events which the entire project was under feet of water resulting in the live stakes being buried under creek gravel and having to be dug out by hand to prevent damage to stakes. This process was time consuming and created an extended finish which seemed to

aggravate Mr. Pederson. Also during the floods the creek rerouted creating an entirely different flow pattern to which Mr. Pederson was not happy.

- Revegetation

  EQM revegetated the disturbed portions of each mine waste parcels and capped repositories via hydroseeding. The effectiveness of the revegetation was reduced as the condition of post-excavation soils. Typically, the soil that EQM encountered post excavation exhibited a higher clay content, low organic content and contained more rocks than was ideal.

  Efforts to revegetate the remediated areas were occasionally made more difficult by issues such as weather or property owners. EQM acquired a sub to hydro seeded multiple areas throughout the contract which then suffered very heavy rainfall causing seed to wash away in some areas. To help prevent this EQM then had the subcontractor drill seed in areas where they would rather than hydro seed in an effort to retain seed during a heavy rainfall event. This worked in some areas but not so much in others. After difficulty getting satisfactory results and the lack of effort on the contractor's part to drill seed in areas requested due to rocky clay (chirt), EQM chose to have a replacement sub the following year. With the new sub all acres were drilled, fertilized and mulched with hay at the rate of 2tn/acre. This proved to be cost effective and seemed to work better in most areas with the hay providing some cover to retain moisture when needed and also help with seed being washed off it seemed.

  There were also properties who turned cattle in on areas as early as 2 days after application which usually meant the cover hay would be eaten reducing the grasses chance to germinate and get established. In other cases when ground was wet the cattle would stomp seed or sprouts into the mud effecting end result. Below is a list of areas affected this way:

  - Richard Starchman - Area 2-3 (Parcel IDs 17702500000021000, 17702500000021000, & 17702500000021001)
  - Mona Ransom – Area 2-3 (Parcel ID 17702500000010001)

  These owners both turned cattle in days after seeding/mulching which EQM believes contributed to the less than ideal establishment of grass in their areas. EQM seeded these parcel's twice over 2 years with varied results

Methods used for the revegetation varied, it was done either by Hydro seeding, drilling or broadcasting of the seed for application.

Hydro seeding was done by combining the seed, fertilizer, mulch and any conditioners or fertilizers needed into slurry which was then sprayed evenly across the area. Usually a dye is included in the mix for a visual reference to what has been seeded and what has not to make the even application easier.

Drilling was simply using a grass drill designed to accurately meter grass seed and could be equipped with a second product box to meter fertilizer in the same application. Otherwise the fertilizer would need to be applied separately by some other means such as broadcasting

Broadcasting was done for multiple reasons but the main positive for EQM was the ability to get across extremely soft ground with various wet spots where a drill will plug with mud creating a difficult and uneven application. The broadcasting method is also easier on the equipment due to no contact with the hard rocky ground which is extremely hard on equipment.

Mulching was also done behind the seeder. This helps retain moisture and seems to help prevent seed from washing off during heavy rain, it also helps in the establishment of organics. Good quality weed free hay is important. The contractor also crimped the hay after spreading. This method was only used on areas such as repositories and the few areas where better soil exists to prevent damage to the implement.

RFB construction was the contractor EQM used in the final phases of contract.

The following is a list of areas RFB construction completed using a Broom sedge, Switchgrass, Fescue mix approved by COR Steve Kemp unless specified repository.

- Areas 2-1, 19-3, 19-1_2, 18-1, snowball repos, MW19-1_2 repos, MW14-1, Area 2-6N, Area 2-7 partial, MW18-1_2, MW14-4,
- A second time seeding was done on following areas
  Area 1-20, area 2-3, area 1-2, MW26-1, Area 2-3, MW14-1, 14-2, MW14-3, MW26-4_5, MW26-1
- These areas were completed by Challenger Construction. Areas include MW09, MW10, Base areas 1,2,3,4,9,13,14,15, 2-5, 1-15, 1-8, 2-9, Following areas also done by Challenger on the first time but required a follow up seed application 1-1, 1-2, 1-3, 1-6, 1-9, 1-20, 2-7, 2-6, 2-3, MW26-1.

10.0 Schedule Impacts

EQM's operations schedule was adversely impacted by both weather and COVID-19 pandemic during the contract period.

10.1 Weather Delays

EQM experienced delays associated with adverse weather throughout the contract period. Precipitation for the Joplin, MO area from April 2018 through April of 2020 was well above season averages, resulting in two requests for extensions to the PoP from EQM. Total impacts for 2015 and 2016 were estimated since EQM's field records were incomplete for those periods.

Table 10 – Number of Workdays impacted by adverse weather

Calendar Year	Workdays canceled (rainouts, too wet, etc.)
2015	12, estimated
2016	36, estimated
2017	36
2018	52
2019	107
2020	77

10.2 Delays Associated with COVID-19

EQM experienced two delays in Option Period 4 related to the COVID-19 pandemic. The first delay as a temporary stop work order issued by USEPA. The stop work order was in place from April 1, 2020 through June 11, 2020. EQM developed and provided new Health & Safety Plans, in response to the new threats posed by the COVID-19 virus, to USEPA before resuming field operations.

The second delay occurred from August 5 – August 16, 2020 as result of COVID-19 illness experienced by three personnel of EQM's field crew, including our superintendent and

quality control/health & safety manager. EQM's Project Manager (PM), Craig Hoby, halted work immediately and had all remaining field crew tested in accordance with EQM's plan and local guidance. EQM resumed work after having received negative test results on the remainder of the field crew and after EQM's PM was available to temporarily provide onsite superintendence and health & safety oversight.

Attachment A

Survey Data

(separate binder)

Attachment B

Chemical Data Final Report

Attachment C

Safety & Health Phase-out Report

Attachment D

Data on Fill Materials

Wildwood Ranch

20th & Malang

Report Number
F16173-0147
Account Number
99990

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3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: ENVIRONMENTAL QUALITY MGMT
1800 CARILLON BLVD
CINCINNATI, OH 45240

For: ORONOGO

Field: JIMMER TPSL 001

Date Received: 6/21/2016
Date Reported: 6/27/2016

SOIL TEST REPORT

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	Soil pH	Buffer pH	CEC meq/100g	Percent Cation Saturation				
			Bray-1 Equiv ppm-P	Bray P2 ppm-P								% K	% Mg	% Ca	% H	% Na
SOIL	62462															

VL = Very Low *L* = Low *M* = Medium *H* = High *VH* = Very High

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO_3-N ppm	Ammonium NH_4-N ppm	Bicarb-P P ppm				Comments
SOIL							0.3 *VL*							

A&L-R

Report Number
F16173-0147
Account Number
99990

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To: ENVIRONMENTAL QUALITY MGMT
1800 CARILLON BLVD
CINCINNATI, OH 45240
USA

For: ORONOGO

JIMMER TPSL 001

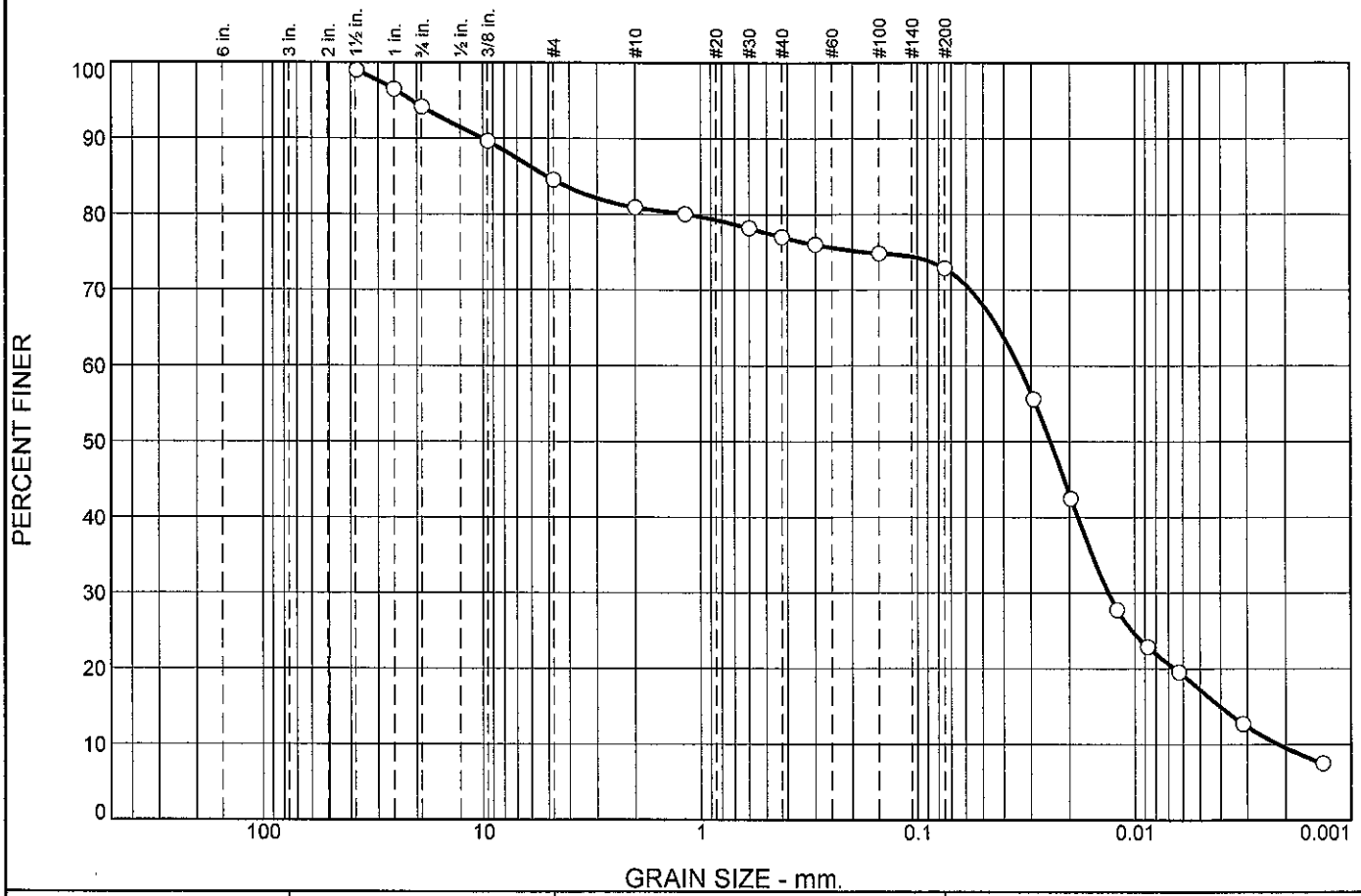
Attn: TROY COOPER

REPORT OF ANALYSIS

Date Received: 06/21/2016
Date Reported: 06/27/2016 **Page:** 1 of 1

Lab Number	Sample ID	Analysis	Result	Unit	Method
62462	SOIL	Organic Matter (Walkley Black)	2.88	%	MSA Part 3 (1996) pp 995-996
		pH (Water)	7.6	Std. Unit	ASTM D4972-01

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
		9.6	3.7	3.9	4.1	55.7	17.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
37.5mm	99.0		
25.4mm	96.5		
19mm	94.2		
9.5mm	89.7		
#4	84.6		
#10	80.9		
#16	80.1		
#30	78.2		
#40	77.0		
#50	76.0		
#100	74.8		
#200	72.9		
0.0293 mm.	55.6		
0.0197 mm.	42.5		
0.0121 mm.	27.8		
0.0087 mm.	22.8		
0.0062 mm.	19.5		
0.0031 mm.	12.8		
0.0013 mm.	7.5		

* (no specification provided)

Soil Description

Grayish Brown Silty Clay with Sand

Atterberg Limits

PL= 23 LL= 28 PI= 5

Coefficients

D_{90}= 9.9805 D_{85}= 5.0621 D_{60}= 0.0343
D_{50}= 0.0246 D_{30}= 0.0133 D_{15}= 0.0040
D_{10}= 0.0021 C_u= 16.08 C_c= 2.41

Classification

USCS= CL-ML AASHTO= A-4(2)

Remarks

Location: Channel - Tpsl 001

Date: 6/22/2016

PALMERTON & PARRISH, INC.
Springfield, MO

Client: Environmental Quality Management, Inc.
Project: Newton County Lead

Project No: 235172 **Figure**

Report Number
F16216-0286

Account Number
99990

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Purchase Order: 216-0286

To: ENVIRONMENTAL QUALITY MGMT
1800 CARILLON BLVD
CINCINNATI, OH 45240

For: ORONOGO 30319.0001
JIMMER

PD VISA

Date Received: 8/3/2016
Date Reported: 8/5/2016

SOIL TEST REPORT

Sample ID	Lab Number	Organic Matter %	Phosphorus		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	Soil pH	Buffer pH	CEC meq/100g	Percent Cation Saturation				
			Bray-1 Equiv ppm-P	Bray P2 ppm-P								% K	% Mg	% Ca	% H	% Na
TPSL 002	45637															

VL = Very Low *L* = Low *M* = Medium *H* = High *VH* = Very High

Sample ID	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts mmhos/cm	Nitrate NO_3-N ppm	Ammonium NH_4-N ppm	Bicarb-P P ppm				Comments
TPSL 002							0.1 *VL*							

Report Number
F16216-0286
Account Number
99990

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To: ENVIRONMENTAL QUALITY MGMT
1800 CARILLON BLVD
CINCINNATI, OH 45240
USA

For: ORONOGO 30319.0001
JIMMER

P.O. Number:

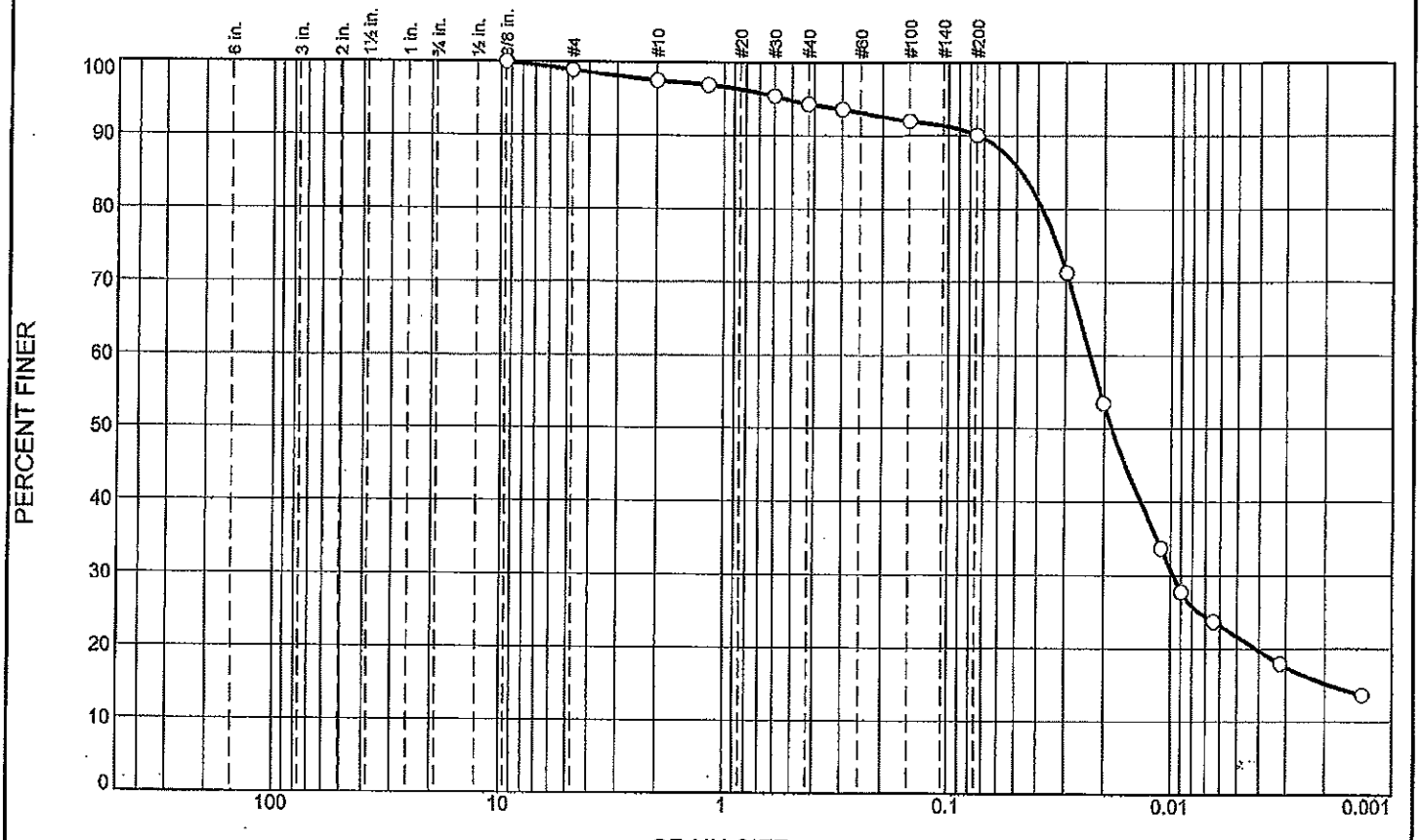
Attn: TROY COOPER

REPORT OF ANALYSIS

Date Received: 08/03/2016
Date Reported: 08/05/2016 **Page:** 1 of 1

Lab Number	Sample ID	Analysis	Result	Unit	Method
45637	TPSL 002	Organic Matter (Walkley Black)	4.30	%	MSA Part 3 (1996) pp 995-996
		pH (Water)	5.3	Std. Unit	ASTM D4972-01

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.1	1.4	3.2	4.3	68.3	21.7

20-35% 25-50% 10-30%

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
0.37" = 9.5mm	100.0		
0.187" = #4 = 4.76mm	98.9		
#10	97.5		
#16	96.9		
#30	95.4		
#40	94.3		
#50	93.6		
#100	91.9		
#200	90.0		
0.0297 mm.	71.3		
0.0202 mm.	53.5		
0.0111 mm.	33.7		
0.0090 mm.	27.8		
0.0064 mm.	23.8		
0.0032 mm.	18.0		
0.0014 mm.	13.7		

specs=
- Max part. size is 3/4" ✓
- 97% finer on 1/4" screen ✓

* (no specification provided)

8.9

Soil Description

Dark Brown Lean Clay

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 0.0745 D_{85}= 0.0477 D_{60}= 0.0233
D_{50}= 0.0185 D_{30}= 0.0098 D_{15}= 0.0019
D_{10}= C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Location: Bulk Sample
Sample Number: JIM32118-4

Date:

PALMERTON & PARRISH, INC.
Springfield, MO

Client: Environmental Quality Management
Project: Oronogo Project

Project No: 236676 **Figure**

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS		Method: **SW8082**		Prep: SW3546 / 3/23/18			Analyst: **KB**
Aroclor 1016	U		0.027	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1221	U		0.027	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1232	U		0.027	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1242	U		0.027	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1248	U		0.027	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1254	U		0.022	0.079	mg/Kg-dry	1	3/26/2018 14:23
Aroclor 1260	U		0.022	0.079	mg/Kg-dry	1	3/26/2018 14:23
Surr: Decachlorobiphenyl	*76.4*			*40-140*	*%REC*	1	3/26/2018 14:23
Surr: Tetrachloro-m-xylene	*73.8*			*45-124*	*%REC*	1	3/26/2018 14:23
PESTICIDES		Method: **SW8081A**		Prep: SW3546 / 3/23/18			Analyst: **KB**
4,4'-DDD	U		0.0013	0.012	mg/Kg-dry	1	3/25/2018 21:05
4,4'-DDE	U		0.0016	0.012	mg/Kg-dry	1	3/25/2018 21:05
4,4'-DDT	U		0.0017	0.012	mg/Kg-dry	1	3/25/2018 21:05
Aldrin	U		0.00086	0.012	mg/Kg-dry	1	3/25/2018 21:05
alpha-BHC	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:05
alpha-Chlordane	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:05
beta-BHC	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:05
Chlordane, Technical	U		0.012	0.029	mg/Kg-dry	1	3/25/2018 21:05
delta-BHC	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:05
Dieldrin	U		0.0013	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endosulfan I	U		0.0015	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endosulfan II	U		0.0010	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endosulfan sulfate	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endrin	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endrin aldehyde	U		0.0021	0.012	mg/Kg-dry	1	3/25/2018 21:05
Endrin ketone	U		0.0010	0.012	mg/Kg-dry	1	3/25/2018 21:05
gamma-BHC (Lindane)	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:05
gamma-Chlordane	U		0.0015	0.012	mg/Kg-dry	1	3/25/2018 21:05
Heptachlor	U		0.00088	0.012	mg/Kg-dry	1	3/25/2018 21:05
Heptachlor epoxide	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:05
Methoxychlor	U		0.0015	0.012	mg/Kg-dry	1	3/25/2018 21:05
Toxaphene	U		0.013	0.071	mg/Kg-dry	1	3/25/2018 21:05
Surr: Decachlorobiphenyl	*76.9*			*50-150*	*%REC*	1	3/25/2018 21:05
Surr: Tetrachloro-m-xylene	*83.2*			*50-150*	*%REC*	1	3/25/2018 21:05
MERCURY BY CVAA		Method: **SW7471B**		Prep: SW7471 / 3/27/18			Analyst: **RSH**
Mercury	**0.025**		**0.0022**	**0.022**	**mg/Kg-dry**	1	3/28/2018 12:28
METALS ANALYSIS BY ICP		Method: **SW846 6010C**		Prep: SW3050B / 3/27/18			Analyst: **HBA**

RSL THQ = 0.1
1.1

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

ORANGED Cleanup

Analyses	THQ=0.1	RSL THQ=1.0	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Aluminum	7700	77000	7,800		0.13	0.83	mg/Kg-dry	1	3/28/2018 07:36
Antimony			U		0.14	0.42	mg/Kg-dry	1	3/28/2018 07:36
Arsenic	0.68	0.68	11		0.11	0.42	mg/Kg-dry	1	3/28/2018 07:36
Barium	1500	15000	99		0.17	0.42	mg/Kg-dry	1	3/28/2018 07:36
Beryllium	16	160	0.64		0.013	0.17	mg/Kg-dry	1	3/28/2018 07:36
40 **Cadmium**	7.1	71	0.15	J	0.040	0.83	mg/Kg-dry	1	3/28/2018 07:36
Chromium	180000#	180000#	34		0.023	0.42	mg/Kg-dry	1	3/28/2018 21:04
Cobalt	2.3	23	7.6		0.033	0.42	mg/Kg-dry	1	3/28/2018 07:36
Copper	310	3100	4.9		0.18	0.83	mg/Kg-dry	1	3/28/2018 07:36
2 **Iron**	5500	55000	25,000		5.0	67	mg/Kg-dry	10	3/28/2018 20:58
400 **Lead**	400	400	25		0.088	0.42	mg/Kg-dry	1	3/28/2018 07:36
Manganese	180	1800	510		0.025	0.42	mg/Kg-dry	1	3/28/2018 21:04
Nickel	67	670 #4	3.4		0.17	0.42	mg/Kg-dry	1	3/28/2018 07:36
Selenium	39	390	1.7		0.23	0.83	mg/Kg-dry	1	3/28/2018 07:36
Silver			U		0.052	0.42	mg/Kg-dry	1	3/28/2018 07:36
Thallium			U		0.35	0.83	mg/Kg-dry	1	3/28/2018 07:36
Vanadium	39	390	80		0.043	0.42	mg/Kg-dry	1	3/28/2018 07:36
6400 **Zinc**	2300	23000	39		0.067	0.83	mg/Kg-dry	1	3/28/2018 07:36
SEMI-VOLATILE ORGANIC COMPOUNDS				Method: **SW846 8270D**			Prep: SW3546 / 3/26/18		Analyst: **RS**
1,1`-Biphenyl			U		0.0062	0.038	mg/Kg-dry	1	3/27/2018 14:19
1,2,4,5-Tetrachlorobenzene			U		0.030	0.38	mg/Kg-dry	1	3/27/2018 14:19
2,3,4,6-Tetrachlorophenol			U		0.010	0.077	mg/Kg-dry	1	3/27/2018 14:19
2,4,5-Trichlorophenol			U		0.010	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,4,6-Trichlorophenol			U		0.010	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,4-Dichlorophenol			U		0.0080	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,4-Dimethylphenol			U		0.0078	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,4-Dinitrophenol			U		0.021	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,4-Dinitrotoluene			U		0.010	0.038	mg/Kg-dry	1	3/27/2018 14:19
2,6-Dinitrotoluene			U		0.0063	0.038	mg/Kg-dry	1	3/27/2018 14:19
2-Chloronaphthalene			U		0.0053	0.0076	mg/Kg-dry	1	3/27/2018 14:19
2-Chlorophenol			U		0.012	0.038	mg/Kg-dry	1	3/27/2018 14:19
2-Methylnaphthalene		24	0.021		0.0039	0.0076	mg/Kg-dry	1	3/27/2018 14:19
2-Methylphenol			U		0.010	0.038	mg/Kg-dry	1	3/27/2018 14:19
2-Nitroaniline			U		0.0088	0.038	mg/Kg-dry	1	3/27/2018 14:19
3&4-Methylphenol			U		0.0077	0.038	mg/Kg-dry	1	3/27/2018 14:19
3,3`-Dichlorobenzidine			U		0.0057	0.19	mg/Kg-dry	1	3/27/2018 14:19
3-Nitroaniline			U		0.0088	0.038	mg/Kg-dry	1	3/27/2018 14:19
4,6-Dinitro-2-methylphenol			U		0.0096	0.038	mg/Kg-dry	1	3/27/2018 14:19
4-Chloro-3-methylphenol			U		0.011	0.038	mg/Kg-dry	1	3/27/2018 14:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

X MCL-based SSL

#4 - No specific RSL for Nickel. # listed is lowest # of all Nickel comp.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

Analyses	RSL THQ=0.1	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Chloroaniline		U		0.0060	0.077	mg/Kg-dry	1	3/27/2018 14:19
4-Nitroaniline		U		0.059	0.19	mg/Kg-dry	1	3/27/2018 14:19
Acenaphthene	3600	**0.0092**		**0.0055**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Acetophenone		U		0.0060	0.038	mg/Kg-dry	1	3/27/2018 14:19
Anthracene	1800	**0.0092**		**0.0054**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Atrazine		U		0.0060	0.038	mg/Kg-dry	1	3/27/2018 14:19
Benzaldehyde		U		0.059	0.077	mg/Kg-dry	1	3/27/2018 14:19
Benzo(a)anthracene		U		0.0066	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Benzo(a)pyrene		U		0.0047	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Benzo(b)fluoranthene		U		0.0057	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Benzo(k)fluoranthene		U		0.0058	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Bis(2-chloroethoxy)methane		U		0.0037	0.038	mg/Kg-dry	1	3/27/2018 14:19
Bis(2-chloroethyl)ether		U		0.011	0.038	mg/Kg-dry	1	3/27/2018 14:19
Bis(2-chloroisopropyl)ether		U		0.0090	0.038	mg/Kg-dry	1	3/27/2018 14:19
Bis(2-ethylhexyl)phthalate	39	**0.070**		**0.0066**	**0.038**	**mg/Kg-dry**	1	3/27/2018 14:19
Butyl benzyl phthalate		U		0.0065	0.038	mg/Kg-dry	1	3/27/2018 14:19
Caprolactam		U		0.013	0.038	mg/Kg-dry	1	3/27/2018 14:19
Chrysene		U		0.0062	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Dibenzo(a,h)anthracene		U		0.0041	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Dibenzofuran	7.3	**0.026**	J	**0.0056**	**0.038**	**mg/Kg-dry**	1	3/27/2018 14:19
Diethyl phthalate		U		0.0058	0.038	mg/Kg-dry	1	3/27/2018 14:19
Dimethyl phthalate		U		0.0075	0.038	mg/Kg-dry	1	3/27/2018 14:19
Di-n-butyl phthalate		U		0.0070	0.038	mg/Kg-dry	1	3/27/2018 14:19
Di-n-octyl phthalate		U		0.0073	0.038	mg/Kg-dry	1	3/27/2018 14:19
Fluoranthene	240	**0.015**		**0.0037**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Fluorene	240	**0.018**		**0.0055**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Hexachlorobenzene		U		0.011	0.038	mg/Kg-dry	1	3/27/2018 14:19
Hexachlorobutadiene		U		0.021	0.038	mg/Kg-dry	1	3/27/2018 14:19
Hexachlorocyclopentadiene		U		0.013	0.038	mg/Kg-dry	1	3/27/2018 14:19
Hexachloroethane		U		0.016	0.038	mg/Kg-dry	1	3/27/2018 14:19
Indeno(1,2,3-cd)pyrene		U		0.0053	0.0076	mg/Kg-dry	1	3/27/2018 14:19
Isophorone		U		0.0075	0.19	mg/Kg-dry	1	3/27/2018 14:19
Naphthalene	3.8	**0.34**		**0.0049**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Nitrobenzene		U		0.013	0.19	mg/Kg-dry	1	3/27/2018 14:19
N-Nitrosodi-n-propylamine		U		0.0063	0.038	mg/Kg-dry	1	3/27/2018 14:19
N-Nitrosodiphenylamine		U		0.0037	0.038	mg/Kg-dry	1	3/27/2018 14:19
Pentachlorophenol		U		0.014	0.038	mg/Kg-dry	1	3/27/2018 14:19
Phenol		U		0.0095	0.038	mg/Kg-dry	1	3/27/2018 14:19
Pyrene	180	**0.0069**	J	**0.0014**	**0.0076**	**mg/Kg-dry**	1	3/27/2018 14:19
Surr: 2,4,6-Tribromophenol		*65.8*			*38-92*	*%REC*	1	3/27/2018 14:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	*57.0*			*44-107*	*%REC*	1	3/27/2018 14:19
Surr: 2-Fluorophenol	*52.7*			*37-109*	*%REC*	1	3/27/2018 14:19
Surr: 4-Terphenyl-d14	*65.2*			*52-123*	*%REC*	1	3/27/2018 14:19
Surr: Nitrobenzene-d5	*49.6*			*41-94*	*%REC*	1	3/27/2018 14:19
Surr: Phenol-d6	*54.3*			*28-111*	*%REC*	1	3/27/2018 14:19
VOLATILE ORGANIC COMPOUNDS			Method: **SW8260B**		Prep: SW5035 / 3/23/18		Analyst: **AK**
Acetone	U		0.043	0.14	mg/Kg-dry	1	3/23/2018 17:37
Surr: 1,2-Dichloroethane-d4	*98.0*			*70-130*	*%REC*	1	3/23/2018 17:37
Surr: 4-Bromofluorobenzene	*89.0*			*70-130*	*%REC*	1	3/23/2018 17:37
Surr: Dibromofluoromethane	*92.6*			*70-130*	*%REC*	1	3/23/2018 17:37
Surr: Toluene-d8	*93.8*			*70-130*	*%REC*	1	3/23/2018 17:37
VOLATILE ORGANIC COMPOUNDS			Method: **SW8260B**				Analyst: **EMR**
1,1,1-Trichloroethane	U		0.00082	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,1,2,2-Tetrachloroethane	U		0.00028	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,1,2-Trichloroethane	U		0.00040	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,1,2-Trichlorotrifluoroethane	U		0.0011	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,1-Dichloroethane	U		0.0021	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,1-Dichloroethene	U		0.0010	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2,3-Trichlorobenzene	U		0.00064	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2,3-Trichloropropane	U		0.00086	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2,4-Trichlorobenzene	U		0.00076	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dibromo-3-chloropropane	U		0.0014	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dibromoethane	U		0.00037	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dichlorobenzene	U		0.00065	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dichloroethane	U		0.00037	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dichloropropane	U		0.00046	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,3-Dichlorobenzene	U		0.00054	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,4-Dichlorobenzene	U		0.00037	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,4-Dioxane	U		0.045	0.10	mg/Kg-dry	0.873	3/27/2018 12:55
2-Butanone 2700	**0.0099**	J	**0.0020**	**0.010**	**mg/Kg-dry**	0.873	3/27/2018 12:55
2-Hexanone	U		0.0010	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
4-Methyl-2-pentanone	U		0.00084	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Benzene	U		0.00054	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Bromochloromethane	U		0.00051	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Bromodichloromethane	U		0.00033	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Bromoform	U		0.00032	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Bromomethane	U		0.00075	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
Carbon disulfide	U		0.00058	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Carbon tetrachloride	U		0.00086	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	U		0.00033	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Chloroethane	U		0.00065	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Chloroform	U		0.00031	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Chloromethane	U		0.00048	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
cis-1,2-Dichloroethene	U		0.00050	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
cis-1,3-Dichloropropene	U		0.00027	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Cyclohexane	U		0.0032	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
Dibromochloromethane	U		0.00049	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Dichlorodifluoromethane	U		0.0011	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
Ethylbenzene	U		0.00062	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Isopropylbenzene	U		0.00066	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
m,p-Xylene	U		0.0013	0.0026	mg/Kg-dry	0.873	3/27/2018 12:55
Methyl acetate	U		0.0013	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
Methyl tert-butyl ether	U		0.00024	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Methylcyclohexane	U		0.0015	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
Methylene chloride	U		0.00089	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
o-Xylene	U		0.00049	0.0026	mg/Kg-dry	0.873	3/27/2018 12:55
Styrene	U		0.00042	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Tetrachloroethene	U		0.00092	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Toluene	U		0.00058	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
trans-1,2-Dichloroethene	U		0.00042	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
trans-1,3-Dichloropropene	U		0.00030	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Trichloroethene	U		0.00075	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Trichlorofluoromethane	U		0.00074	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Vinyl chloride	U		0.00073	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
1,2-Dichloroethene, Total	U		0.00091	0.010	mg/Kg-dry	0.873	3/27/2018 12:55
1,3-Dichloropropene, Total	U		0.00057	0.016	mg/Kg-dry	0.873	3/27/2018 12:55
Xylenes, Total	U		0.0018	0.0052	mg/Kg-dry	0.873	3/27/2018 12:55
Surr: 1,2-Dichloroethane-d4	*108*			*83-132*	*%REC*	0.873	3/27/2018 12:55
Surr: 4-Bromofluorobenzene	*98.8*			*83-111*	*%REC*	0.873	3/27/2018 12:55
Surr: Dibromofluoromethane	*103*			*77-125*	*%REC*	0.873	3/27/2018 12:55
Surr: Toluene-d8	*96.8*			*86-108*	*%REC*	0.873	3/27/2018 12:55
MOISTURE			Method: **SW3550C**				Analyst: **NW**
Moisture	**16**		**0.025**	**0.050**	**% of sample**	1	3/27/2018 14:50
CHLORINATED HERBICIDES			Method: **SW8151**				Analyst: **ALS**
2,4,5-T	U		0.0017	0.0039	mg/Kg-dry	1	3/29/2018 23:26
2,4,5-TP (Silvex)	U		0.0020	0.0039	mg/Kg-dry	1	3/29/2018 23:26
2,4-D	U		0.00083	0.0078	mg/Kg-dry	1	3/29/2018 23:26
2,4-DB	U		0.0011	0.0078	mg/Kg-dry	1	3/29/2018 23:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-1
Collection Date: 3/21/2018 09:00 AM

Work Order: 18031400
Lab ID: 18031400-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dalapon	U		0.0014	0.0039	mg/Kg-dry	1	3/29/2018 23:26
Dicamba	U		0.0015	0.0039	mg/Kg-dry	1	3/29/2018 23:26
Dinoseb	U		0.0017	0.0039	mg/Kg-dry	1	3/29/2018 23:26
MCPA	U		0.12	0.78	mg/Kg-dry	1	3/29/2018 23:26
MCPP	U		0.19	0.78	mg/Kg-dry	1	3/29/2018 23:26
Surr: DCAA	*95.9*			*30-150*	*%REC*	1	3/29/2018 23:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS		Method: **SW8082**			Prep: SW3546 / 3/23/18		Analyst: **KB**
Aroclor 1016	U		0.027	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1221	U		0.027	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1232	U		0.027	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1242	U		0.027	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1248	U		0.027	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1254	U		0.022	0.078	mg/Kg-dry	1	3/26/2018 15:06
Aroclor 1260	U		0.022	0.078	mg/Kg-dry	1	3/26/2018 15:06
Surr: Decachlorobiphenyl	*89.4*			*40-140*	*%REC*	1	3/26/2018 15:06
Surr: Tetrachloro-m-xylene	*89.8*			*45-124*	*%REC*	1	3/26/2018 15:06
PESTICIDES		Method: **SW8081A**			Prep: SW3546 / 3/23/18		Analyst: **KB**
4,4´-DDD	U		0.0013	0.012	mg/Kg-dry	1	3/25/2018 21:58
4,4´-DDE	U		0.0016	0.012	mg/Kg-dry	1	3/25/2018 21:58
4,4´-DDT	U		0.0017	0.012	mg/Kg-dry	1	3/25/2018 21:58
Aldrin	U		0.00085	0.012	mg/Kg-dry	1	3/25/2018 21:58
alpha-BHC	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:58
alpha-Chlordane	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:58
beta-BHC	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:58
Chlordane, Technical	U		0.012	0.029	mg/Kg-dry	1	3/25/2018 21:58
delta-BHC	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:58
Dieldrin	U		0.0013	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endosulfan I	U		0.0014	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endosulfan II	U		0.0010	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endosulfan sulfate	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endrin	U		0.0012	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endrin aldehyde	U		0.0020	0.012	mg/Kg-dry	1	3/25/2018 21:58
Endrin ketone	U		0.0010	0.012	mg/Kg-dry	1	3/25/2018 21:58
gamma-BHC (Lindane)	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:58
gamma-Chlordane	U		0.0014	0.012	mg/Kg-dry	1	3/25/2018 21:58
Heptachlor	U		0.00087	0.012	mg/Kg-dry	1	3/25/2018 21:58
Heptachlor epoxide	U		0.0011	0.012	mg/Kg-dry	1	3/25/2018 21:58
Methoxychlor	U		0.0015	0.012	mg/Kg-dry	1	3/25/2018 21:58
Toxaphene	U		0.013	0.070	mg/Kg-dry	1	3/25/2018 21:58
Surr: Decachlorobiphenyl	*92.0*			*50-150*	*%REC*	1	3/25/2018 21:58
Surr: Tetrachloro-m-xylene	*103*			*50-150*	*%REC*	1	3/25/2018 21:58
MERCURY BY CVAA		Method: **SW7471B**			Prep: SW7471 / 3/27/18		Analyst: **RSH**
Mercury	**0.023**		**0.0022**	**0.022**	**mg/Kg-dry**	1	3/28/2018 12:36
METALS ANALYSIS BY ICP		Method: **SW846 6010C**			Prep: SW3050B / 3/27/18		Analyst: **HBA**

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	THQ=0.1	THQ=1.0	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Aluminum	7700	77000	7,600		0.13	0.85	mg/Kg-dry	1	3/28/2018 07:43
Antimony			U		0.14	0.43	mg/Kg-dry	1	3/28/2018 07:43
Arsenic	0.68	6.8	6.5		0.11	0.43	mg/Kg-dry	1	3/28/2018 07:43
Barium	1500	15000	83		0.17	0.43	mg/Kg-dry	1	3/28/2018 07:43
Beryllium	16	160	0.59		0.014	0.17	mg/Kg-dry	1	3/28/2018 07:43
Cadmium	7.1	71	0.20	J	0.041	0.85	mg/Kg-dry	1	3/28/2018 07:43
Chromium	18000	18000	23		0.024	0.43	mg/Kg-dry	1	3/28/2018 21:10
Cobalt	2.3	23	5.3		0.034	0.43	mg/Kg-dry	1	3/28/2018 07:43
Copper	310	3100	4.9		0.19	0.85	mg/Kg-dry	1	3/28/2018 07:43
Iron	5500	55000	14,000		0.51	6.8	mg/Kg-dry	1	3/28/2018 07:43
Lead	400	400	17		0.090	0.43	mg/Kg-dry	1	3/28/2018 07:43
Manganese	180	1800	240		0.026	0.43	mg/Kg-dry	1	3/28/2018 21:10
Nickel	47	470	3.1		0.17	0.43	mg/Kg-dry	1	3/28/2018 07:43
Selenium	39	390	1.7		0.24	0.85	mg/Kg-dry	1	3/28/2018 07:43
Silver			U		0.053	0.43	mg/Kg-dry	1	3/28/2018 07:43
Thallium			U		0.36	0.85	mg/Kg-dry	1	3/28/2018 07:43
Vanadium	39	390	50		0.044	0.43	mg/Kg-dry	1	3/28/2018 07:43
Zinc	2300	23000	40		0.068	0.85	mg/Kg-dry	1	3/28/2018 07:43
SEMI-VOLATILE ORGANIC COMPOUNDS				Method: **SW846 8270D**			Prep: SW3546 / 3/26/18		Analyst: **RS**
1,1`-Biphenyl			U		0.0064	0.039	mg/Kg-dry	1	3/27/2018 14:43
1,2,4,5-Tetrachlorobenzene			U		0.031	0.39	mg/Kg-dry	1	3/27/2018 14:43
2,3,4,6-Tetrachlorophenol			U		0.010	0.079	mg/Kg-dry	1	3/27/2018 14:43
2,4,5-Trichlorophenol			U		0.011	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,4,6-Trichlorophenol			U		0.010	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,4-Dichlorophenol			U		0.0083	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,4-Dimethylphenol			U		0.0081	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,4-Dinitrophenol			U		0.021	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,4-Dinitrotoluene			U		0.010	0.039	mg/Kg-dry	1	3/27/2018 14:43
2,6-Dinitrotoluene			U		0.0065	0.039	mg/Kg-dry	1	3/27/2018 14:43
2-Chloronaphthalene			U		0.0055	0.0079	mg/Kg-dry	1	3/27/2018 14:43
2-Chlorophenol			U		0.012	0.039	mg/Kg-dry	1	3/27/2018 14:43
2-Methylnaphthalene	24		0.0047	J	0.0040	0.0079	mg/Kg-dry	1	3/27/2018 14:43
2-Methylphenol			U		0.011	0.039	mg/Kg-dry	1	3/27/2018 14:43
2-Nitroaniline			U		0.0090	0.039	mg/Kg-dry	1	3/27/2018 14:43
3&4-Methylphenol			U		0.0079	0.039	mg/Kg-dry	1	3/27/2018 14:43
3,3'-Dichlorobenzidine			U		0.0059	0.20	mg/Kg-dry	1	3/27/2018 14:43
3-Nitroaniline			U		0.0090	0.039	mg/Kg-dry	1	3/27/2018 14:43
4,6-Dinitro-2-methylphenol			U		0.0099	0.039	mg/Kg-dry	1	3/27/2018 14:43
4-Chloro-3-methylphenol			U		0.011	0.039	mg/Kg-dry	1	3/27/2018 14:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
4-Chloroaniline	U		0.0062	0.079	mg/Kg-dry	1	3/27/2018 14:43
4-Nitroaniline	U		0.061	0.20	mg/Kg-dry	1	3/27/2018 14:43
Acenaphthene	U		0.0057	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Acetophenone	U		0.0062	0.039	mg/Kg-dry	1	3/27/2018 14:43
Anthracene	U		0.0056	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Atrazine	U		0.0062	0.039	mg/Kg-dry	1	3/27/2018 14:43
Benzaldehyde	U		0.061	0.079	mg/Kg-dry	1	3/27/2018 14:43
Benzo(a)anthracene	U		0.0068	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Benzo(a)pyrene	U		0.0048	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Benzo(b)fluoranthene	U		0.0059	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Benzo(k)fluoranthene	U		0.0060	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Bis(2-chloroethoxy)methane	U		0.0038	0.039	mg/Kg-dry	1	3/27/2018 14:43
Bis(2-chloroethyl)ether	U		0.011	0.039	mg/Kg-dry	1	3/27/2018 14:43
Bis(2-chloroisopropyl)ether	U		0.0092	0.039	mg/Kg-dry	1	3/27/2018 14:43
Bis(2-ethylhexyl)phthalate	U		0.0068	0.039	mg/Kg-dry	1	3/27/2018 14:43
Butyl benzyl phthalate	U		0.0067	0.039	mg/Kg-dry	1	3/27/2018 14:43
Caprolactam	U		0.013	0.039	mg/Kg-dry	1	3/27/2018 14:43
Chrysene	U		0.0064	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Dibenzo(a,h)anthracene	U		0.0043	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Dibenzofuran	U		0.0058	0.039	mg/Kg-dry	1	3/27/2018 14:43
Diethyl phthalate	U		0.0060	0.039	mg/Kg-dry	1	3/27/2018 14:43
Dimethyl phthalate	U		0.0077	0.039	mg/Kg-dry	1	3/27/2018 14:43
Di-n-butyl phthalate	U		0.0072	0.039	mg/Kg-dry	1	3/27/2018 14:43
Di-n-octyl phthalate	U		0.0076	0.039	mg/Kg-dry	1	3/27/2018 14:43
Fluoranthene	U		0.0038	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Fluorene	U		0.0057	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Hexachlorobenzene	U		0.011	0.039	mg/Kg-dry	1	3/27/2018 14:43
Hexachlorobutadiene	U		0.021	0.039	mg/Kg-dry	1	3/27/2018 14:43
Hexachlorocyclopentadiene	U		0.013	0.039	mg/Kg-dry	1	3/27/2018 14:43
Hexachloroethane	U		0.016	0.039	mg/Kg-dry	1	3/27/2018 14:43
Indeno(1,2,3-cd)pyrene	U		0.0055	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Isophorone	U		0.0077	0.20	mg/Kg-dry	1	3/27/2018 14:43
Naphthalene	U		0.0050	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Nitrobenzene	U		0.013	0.20	mg/Kg-dry	1	3/27/2018 14:43
N-Nitrosodi-n-propylamine	U		0.0065	0.039	mg/Kg-dry	1	3/27/2018 14:43
N-Nitrosodiphenylamine	U		0.0038	0.039	mg/Kg-dry	1	3/27/2018 14:43
Pentachlorophenol	U		0.015	0.039	mg/Kg-dry	1	3/27/2018 14:43
Phenol	U		0.0098	0.039	mg/Kg-dry	1	3/27/2018 14:43
Pyrene	U		0.0014	0.0079	mg/Kg-dry	1	3/27/2018 14:43
Surr: 2,4,6-Tribromophenol	*60.0*			*38-92*	*%REC*	1	3/27/2018 14:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	*51.3*			*44-107*	*%REC*	1	3/27/2018 14:43
Surr: 2-Fluorophenol	*48.7*			*37-109*	*%REC*	1	3/27/2018 14:43
Surr: 4-Terphenyl-d14	*63.7*			*52-123*	*%REC*	1	3/27/2018 14:43
Surr: Nitrobenzene-d5	*46.1*			*41-94*	*%REC*	1	3/27/2018 14:43
Surr: Phenol-d6	*47.9*			*28-111*	*%REC*	1	3/27/2018 14:43
VOLATILE ORGANIC COMPOUNDS			Method: **SW8260B**		Prep: SW5035 / 3/23/18		Analyst: **AK**
Acetone	U		0.043	0.14	mg/Kg-dry	1	3/23/2018 18:02
Surr: 1,2-Dichloroethane-d4	*97.2*			*70-130*	*%REC*	1	3/23/2018 18:02
Surr: 4-Bromofluorobenzene	*92.0*			*70-130*	*%REC*	1	3/23/2018 18:02
Surr: Dibromofluoromethane	*92.6*			*70-130*	*%REC*	1	3/23/2018 18:02
Surr: Toluene-d8	*92.0*			*70-130*	*%REC*	1	3/23/2018 18:02
VOLATILE ORGANIC COMPOUNDS			Method: **SW8260B**				Analyst: **EMR**
1,1,1-Trichloroethane	U		0.00088	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,1,2,2-Tetrachloroethane	U		0.00030	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,1,2-Trichloroethane	U		0.00043	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,1,2-Trichlorotrifluoroethane	U		0.0012	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,1-Dichloroethane	U		0.0023	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,1-Dichloroethene	U		0.0011	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2,3-Trichlorobenzene	U		0.00069	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2,3-Trichloropropane	U		0.00092	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2,4-Trichlorobenzene	U		0.00081	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dibromo-3-chloropropane	U		0.0015	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dibromoethane	U		0.00040	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dichlorobenzene	U		0.00070	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dichloroethane	U		0.00040	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dichloropropane	U		0.00049	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,3-Dichlorobenzene	U		0.00058	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,4-Dichlorobenzene	U		0.00040	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,4-Dioxane	U		0.049	0.11	mg/Kg-dry	0.933	3/27/2018 13:11
2-Butanone 2700	**0.011**		**0.0021**	**0.011**	**mg/Kg-dry**	0.933	3/27/2018 13:11
2-Hexanone	U		0.0011	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
4-Methyl-2-pentanone	U		0.00090	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Benzene	U		0.00058	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Bromochloromethane	U		0.00055	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Bromodichloromethane	U		0.00036	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Bromoform	U		0.00035	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Bromomethane	U		0.00080	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
Carbon disulfide	U		0.00062	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Carbon tetrachloride	U		0.00092	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chlorobenzene	U		0.00036	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Chloroethane	U		0.00070	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Chloroform	U		0.00033	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Chloromethane	U		0.00051	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
cis-1,2-Dichloroethene	U		0.00053	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
cis-1,3-Dichloropropene	U		0.00029	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Cyclohexane	U		0.0034	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
Dibromochloromethane	U		0.00052	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Dichlorodifluoromethane	U		0.0012	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
Ethylbenzene	U		0.00067	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Isopropylbenzene	U		0.00071	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
m,p-Xylene	U		0.0014	0.0028	mg/Kg-dry	0.933	3/27/2018 13:11
Methyl acetate	U		0.0013	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
Methyl tert-butyl ether	U		0.00026	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Methylcyclohexane	U		0.0017	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
Methylene chloride	U		0.00096	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
o-Xylene	U		0.00052	0.0028	mg/Kg-dry	0.933	3/27/2018 13:11
Styrene	U		0.00045	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Tetrachloroethene	U		0.00099	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Toluene 4900	**0.00067**	J	**0.00062**	**0.0056**	**mg/Kg-dry**	0.933	3/27/2018 13:11
trans-1,2-Dichloroethene	U		0.00045	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
trans-1,3-Dichloropropene	U		0.00032	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Trichloroethene	U		0.00080	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Trichlorofluoromethane	U		0.00079	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Vinyl chloride	U		0.00078	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
1,2-Dichloroethene, Total	U		0.00098	0.011	mg/Kg-dry	0.933	3/27/2018 13:11
1,3-Dichloropropene, Total	U		0.00061	0.017	mg/Kg-dry	0.933	3/27/2018 13:11
Xylenes, Total	U		0.0019	0.0056	mg/Kg-dry	0.933	3/27/2018 13:11
Surr: 1,2-Dichloroethane-d4	*110*			*83-132*	*%REC*	0.933	3/27/2018 13:11
Surr: 4-Bromofluorobenzene	*102*			*83-111*	*%REC*	0.933	3/27/2018 13:11
Surr: Dibromofluoromethane	*104*			*77-125*	*%REC*	0.933	3/27/2018 13:11
Surr: Toluene-d8	*95.0*			*86-108*	*%REC*	0.933	3/27/2018 13:11
MOISTURE		Method: **SW3550C**					Analyst: **NW**
Moisture	**16**		**0.025**	**0.050**	**% of sample**	1	3/27/2018 14:50
CHLORINATED HERBICIDES		Method: **SW8151**					Analyst: **ALS**
2,4,5-T	U		0.0017	0.0039	mg/Kg-dry	1	3/30/2018 01:00
2,4,5-TP (Silvex)	U		0.0020	0.0039	mg/Kg-dry	1	3/30/2018 01:00
2,4-D	U		0.00083	0.0079	mg/Kg-dry	1	3/30/2018 01:00
2,4-DB	U		0.0011	0.0079	mg/Kg-dry	1	3/30/2018 01:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Mar-18*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Sample ID: JIM32118-2
Collection Date: 3/21/2018 09:50 AM

Work Order: 18031400
Lab ID: 18031400-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dalapon	U		0.0014	0.0039	mg/Kg-dry	1	3/30/2018 01:00
Dicamba	U		0.0015	0.0039	mg/Kg-dry	1	3/30/2018 01:00
Dinoseb	U		0.0017	0.0039	mg/Kg-dry	1	3/30/2018 01:00
MCPA	U		0.12	0.79	mg/Kg-dry	1	3/30/2018 01:00
MCPP	U		0.19	0.79	mg/Kg-dry	1	3/30/2018 01:00
Surr: DCAA	*106*			*30-150*	*%REC*	1	3/30/2018 01:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

Report Number
F18081-0445
Account Number
25565

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Scientists who don't mind getting dirty.™

3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

To: ENVIRONMENTAL QUALITY MGMT.
1800 CARILLON BLVD
CINCINNATI, OH 45240

For: ORONOGO

P.O. Number: 30319.0001

Attn: ANGYE DRAGOTTA

REPORT OF ANALYSIS

Date Received: 03/22/2018
Date Reported: 03/27/2018 Page: 1 of 1

Lab Number	Sample ID	Analysis	Result	Unit	Method	Standard
10564	JIM32118-3	Organic Matter (Walkley Black)	1.98	%	MSA Part 3 (1996) pp 995-996	5-10%
		pH (Water)	7.8	Std. Unit	ASTM D4972-01	5.5 to 7
		Soluble Salt Calc. ppm	64	ppm	mmho/cm x 640	2600 ppm

Wildwood Ranch

20th & Central City Road

19-Oct-2020

Angye Dragotta
Environmental Quality Management, Inc.
1800 Carillon Blvd
Cincinnati, OH 45240

Re: **Oronogo** Work Order: **20100478**

Dear Angye,

ALS Environmental received 1 sample on 06-Oct-2020 10:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 52.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 19-Oct-20

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: **20100478**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20100478-01	Wildwood 02	Soil		10/5/2020 08:15	10/6/2020 10:30	☐

Client: Environmental Quality Management, Inc.
Project: Oronogo
WorkOrder: **20100478**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
as noted	
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20100478

Case Narrative

Samples for the above noted Work Order were received on 10/6/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch R300509, Method SW8260C, Sample VLCSS1-201016: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: bromomethane, dichlorodifluoromethane

Extractable Organics:
Batch 165838, Method SW8081A, Sample 20100478-01C MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Multiple - See QC report.

Batch 165838, Method SW8081A, Sample 20100478-01C MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Multiple - See QC report.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: *19-Oct-20*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20100478
Sample ID: Wildwood 02
Lab ID: 20100478-01
Collection Date: 10/5/2020 08:15 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: SW3546 10/13/20 11:39		Analyst: **RM**
Aroclor 1016	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1221	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1232	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1242	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1248	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1254	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Aroclor 1260	ND		0.28	mg/Kg-dry	1	10/13/2020 02:12 PM
Surr: Decachlorobiphenyl	*102*		*40-140*	*%REC*	1	10/13/2020 02:12 PM
Surr: Tetrachloro-m-xylene	*101*		*45-124*	*%REC*	1	10/13/2020 02:12 PM
PESTICIDES			**SW8081A**	Prep: SW3546 10/13/20 11:39		Analyst: **RM**
4,4´-DDD	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
4,4´-DDE	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
4,4´-DDT	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Aldrin	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
alpha-BHC	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
alpha-Chlordane	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
beta-BHC	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Chlordane, Technical	ND		0.10	mg/Kg-dry	1	10/13/2020 02:41 PM
delta-BHC	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Dieldrin	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endosulfan I	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endosulfan II	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endosulfan sulfate	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endrin	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endrin aldehyde	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Endrin ketone	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
gamma-BHC (Lindane)	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
gamma-Chlordane	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Heptachlor	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Heptachlor epoxide	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Methoxychlor	ND		0.042	mg/Kg-dry	1	10/13/2020 02:41 PM
Toxaphene	ND		0.25	mg/Kg-dry	1	10/13/2020 02:41 PM
Surr: Decachlorobiphenyl	*85.8*		*50-150*	*%REC*	1	10/13/2020 02:41 PM
Surr: Tetrachloro-m-xylene	*93.9*		*50-150*	*%REC*	1	10/13/2020 02:41 PM
MERCURY BY CVAA			**SW7471B**	Prep: SW7471 10/7/20 09:20		Analyst: **MAC**
Mercury	ND		0.020	mg/Kg-dry	1	10/7/2020 02:50 PM
METALS BY ICP-MS			**SW6020B**	Prep: SW3050B 10/9/20 15:45		Analyst: **DSC**

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20100478
Sample ID: Wildwood 02 **Lab ID:** 20100478-01
Collection Date: 10/5/2020 08:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aluminum	**8,100**		**320**	**mg/Kg-dry**	100	10/11/2020 02:42 PM
Antimony	ND		0.40	mg/Kg-dry	1	10/9/2020 11:02 PM
Arsenic	**7.5**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Barium	**2,400**		**40**	**mg/Kg-dry**	100	10/11/2020 02:44 PM
Beryllium	**0.89**		**0.16**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Cadmium	ND		0.16	mg/Kg-dry	1	10/9/2020 11:02 PM
Calcium	**1,900**		**40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Chromium	**14**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Cobalt	**19**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Copper	**4.5**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Iron	**200,000**		**1,600**	**mg/Kg-dry**	100	10/11/2020 02:44 PM
Lead	**35**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Magnesium	**560**		**16**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Manganese	**1,300**		**40**	**mg/Kg-dry**	100	10/11/2020 02:42 PM
Nickel	**5.1**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Potassium	**400**		**16**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Selenium	**0.79**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Silver	ND		0.40	mg/Kg-dry	1	10/9/2020 11:02 PM
Sodium	**34**		**24**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Thallium	ND		0.40	mg/Kg-dry	1	10/9/2020 11:02 PM
Vanadium	**42**		**0.40**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
Zinc	**25**		**0.80**	**mg/Kg-dry**	1	10/9/2020 11:02 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**	Prep: SW3546 10/8/20 14:11		Analyst: **JZB**
1,1`-Biphenyl	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4,5-Trichlorophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4,6-Trichlorophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4-Dichlorophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4-Dimethylphenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4-Dinitrophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,4-Dinitrotoluene	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2,6-Dinitrotoluene	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Chloronaphthalene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Chlorophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Methylnaphthalene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Methylphenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Nitroaniline	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
2-Nitrophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
3&4-Methylphenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
3,3´-Dichlorobenzidine	ND		0.19	mg/Kg-dry	1	10/12/2020 09:05 PM
3-Nitroaniline	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20100478
Sample ID: Wildwood 02 **Lab ID:** 20100478-01
Collection Date: 10/5/2020 08:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
4,6-Dinitro-2-methylphenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Bromophenyl phenyl ether	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Chloro-3-methylphenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Chloroaniline	ND		0.075	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Chlorophenyl phenyl ether	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Nitroaniline	ND		0.19	mg/Kg-dry	1	10/12/2020 09:05 PM
4-Nitrophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Acenaphthene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Acenaphthylene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Acetophenone	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Anthracene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Atrazine	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzaldehyde	ND		0.075	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzo(a)anthracene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzo(a)pyrene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzo(b)fluoranthene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzo(g,h,i)perylene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Benzo(k)fluoranthene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Bis(2-chloroethoxy)methane	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Bis(2-chloroethyl)ether	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Bis(2-chloroisopropyl)ether	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Bis(2-ethylhexyl)phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Butyl benzyl phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Caprolactam	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Carbazole	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Chrysene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Dibenzo(a,h)anthracene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Dibenzofuran	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Diethyl phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Dimethyl phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Di-n-butyl phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Di-n-octyl phthalate	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Fluoranthene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Fluorene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Hexachlorobenzene	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Hexachlorobutadiene	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Hexachlorocyclopentadiene	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Hexachloroethane	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Indeno(1,2,3-cd)pyrene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Isophorone	ND		0.19	mg/Kg-dry	1	10/12/2020 09:05 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20100478
Sample ID: Wildwood 02 **Lab ID:** 20100478-01
Collection Date: 10/5/2020 08:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Nitrobenzene	ND		0.19	mg/Kg-dry	1	10/12/2020 09:05 PM
N-Nitrosodi-n-propylamine	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
N-Nitrosodiphenylamine	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Pentachlorophenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Phenanthrene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Phenol	ND		0.037	mg/Kg-dry	1	10/12/2020 09:05 PM
Pyrene	ND		0.0074	mg/Kg-dry	1	10/12/2020 09:05 PM
Surr: 2,4,6-Tribromophenol	*63.0*		*38-92*	*%REC*	1	10/12/2020 09:05 PM
Surr: 2-Fluorobiphenyl	*67.7*		*44-107*	*%REC*	1	10/12/2020 09:05 PM
Surr: 2-Fluorophenol	*48.8*		*37-109*	*%REC*	1	10/12/2020 09:05 PM
Surr: 4-Terphenyl-d14	*67.6*		*52-123*	*%REC*	1	10/12/2020 09:05 PM
Surr: Nitrobenzene-d5	*63.1*		*41-94*	*%REC*	1	10/12/2020 09:05 PM
Surr: Phenol-d6	*50.0*		*28-111*	*%REC*	1	10/12/2020 09:05 PM
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL			**SW8260C**			Analyst: **SJB**
1,1,1-Trichloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,1,2,2-Tetrachloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,1,2-Trichloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,1,2-Trichlorotrifluoroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,1-Dichloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,1-Dichloroethene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2,4-Trichlorobenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2-D bromo-3-chloropropane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2-D bromoethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2-Dichlorobenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2-Dichloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,2-Dichloropropane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,3-Dichlorobenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
1,4-Dichlorobenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
2-Butanone	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
2-Methylnaphthalene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
4-Methyl-2-pentanone	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Acetone	**0.084**		**0.013**	**mg/Kg-dry**	1.152	10/16/2020 01:00 PM
Benzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Bromodichloromethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Bromoform	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Bromomethane	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Carbon disulfide	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Carbon tetrachloride	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Chlorobenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20100478
Sample ID: Wildwood 02 **Lab ID:** 20100478-01
Collection Date: 10/5/2020 08:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Chloroform	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Chloromethane	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
cis-1,2-Dichloroethene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
cis-1,3-Dichloropropene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Cyclohexane	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Dibromochloromethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Dichlorodifluoromethane	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Ethylbenzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Isopropy benzene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Methyl acetate	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Methyl tert-butyl ether	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Methylcyclohexane	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Methylene chloride	ND		0.013	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Styrene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Tetrachloroethene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Toluene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
trans-1,2-Dichloroethene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
trans-1,3-Dichloropropene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Trichloroethene	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Trichlorofluoromethane	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Vinyl chloride	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Xylenes, Total	ND		0.0066	mg/Kg-dry	1.152	10/16/2020 01:00 PM
Surr: 1,2-Dichloroethane-d4	*108*		*83-132*	*%REC*	1.152	10/16/2020 01:00 PM
Surr: 4-Bromofluorobenzene	*103*		*83-111*	*%REC*	1.152	10/16/2020 01:00 PM
Surr: Dibromofluoromethane	*104*		*77-125*	*%REC*	1.152	10/16/2020 01:00 PM
Surr: Toluene-d8	*97.0*		*86-108*	*%REC*	1.152	10/16/2020 01:00 PM
MOISTURE			**SW3550C**			Analyst: **KTP**
Moisture	**12**		**0.10**	**% of sample**	1	10/15/2020 11:59 AM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **ALS**
Subcontracted Analyses	**See report**			**as noted**	1	10/14/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **165641** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-165641-165641** Units: **µg/Kg** Analysis Date: **10/9/2020 06:09 PM**

Client ID: Run ID: **GC14_201009A** SeqNo: **6783001** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	67								
Aroclor 1221	ND	67								
Aroclor 1232	ND	67								
Aroclor 1242	ND	67								
Aroclor 1248	ND	67								
Aroclor 1254	ND	67								
Aroclor 1260	ND	67								
Surr: Decachlorobiphenyl	*34.23*	0	*33.3*	0	*103*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*35.78*	0	*33.3*	0	*107*	*45-124*	0			

LCS Sample ID: **PLCSS1-165641-165641** Units: **µg/Kg** Analysis Date: **10/9/2020 06:25 PM**

Client ID: Run ID: **GC14_201009A** SeqNo: **6783002** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	810	67	833	0	97.2	50-130	0			
Aroclor 1260	728.3	67	833	0	87.4	50-130	0			
Surr: Decachlorobiphenyl	*33.42*	0	*33.3*	0	*100*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*35.25*	0	*33.3*	0	*106*	*45-124*	0			

MS Sample ID: **20100633-08B MS** Units: **µg/Kg** Analysis Date: **10/9/2020 06:40 PM**

Client ID: Run ID: **GC14_201009A** SeqNo: **6783003** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	630.2	65	815	0	77.3	40-140	0			
Aroclor 1260	599.7	65	815	0	73.6	40-140	0			
Surr: Decachlorobiphenyl	*23.72*	0	*32.58*	0	*72.8*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*30.92*	0	*32.58*	0	*94.9*	*45-124*	0			

MSD Sample ID: **20100633-08B MSD** Units: **µg/Kg** Analysis Date: **10/9/2020 06:55 PM**

Client ID: Run ID: **GC14_201009A** SeqNo: **6783004** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	733.9	66	820.5	0	89.4	40-140	630.2	15.2	50	
Aroclor 1260	725.8	66	820.5	0	88.5	40-140	599.7	19	50	
Surr: Decachlorobiphenyl	*28.93*	0	*32.8*	0	*88.2*	*40-140*	23.72	*19.8*	*50*	
Surr: Tetrachloro-m-xylene	*31.96*	0	*32.8*	0	*97.4*	*45-124*	30.92	*3.33*	*50*	

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165837** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-165837-165837** Units: **µg/Kg** Analysis Date: **10/13/2020 01:05 PM**
Client ID: Run ID: **GC14_201013A** SeqNo: **6787131** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	67								
Aroclor 1221	ND	67								
Aroclor 1232	ND	67								
Aroclor 1242	ND	67								
Aroclor 1248	ND	67								
Aroclor 1254	ND	67								
Aroclor 1260	ND	67								
Surr: Decachlorobiphenyl	*36.45*	0	*33.3*	0	*109*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*34.98*	0	*33.3*	0	*105*	*45-124*	0			

LCS Sample ID: **PLCSS1-165837-165837** Units: **µg/Kg** Analysis Date: **10/13/2020 01:21 PM**
Client ID: Run ID: **GC14_201013A** SeqNo: **6787132** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	751.3	67	833	0	90.2	50-130	0			
Aroclor 1260	782.9	67	833	0	94	50-130	0			
Surr: Decachlorobiphenyl	*33.83*	0	*33.3*	0	*102*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*34.07*	0	*33.3*	0	*102*	*45-124*	0			

MS Sample ID: **20100478-01C MS** Units: **µg/Kg** Analysis Date: **10/13/2020 01:36 PM**
Client ID: **Wildwood 02** Run ID: **GC14_201013A** SeqNo: **6787133** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	699.5	66	826.7	0	84.6	40-140	0			
Aroclor 1260	672.2	66	826.7	0	81.3	40-140	0			
Surr: Decachlorobiphenyl	*29.13*	0	*33.05*	0	*88.1*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*31.56*	0	*33.05*	0	*95.5*	*45-124*	0			

MSD Sample ID: **20100478-01C MSD** Units: **µg/Kg** Analysis Date: **10/13/2020 01:57 PM**
Client ID: **Wildwood 02** Run ID: **GC14_201013A** SeqNo: **6787134** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	637.5	66	824	0	77.4	40-140	699.5	9.27	50	
Aroclor 1260	654.3	66	824	0	79.4	40-140	672.2	2.71	50	
Surr: Decachlorobiphenyl	*26.41*	0	*32.94*	0	*80.2*	*40-140*	29.13	*9.78*	*50*	
Surr: Tetrachloro-m-xylene	*27.37*	0	*32.94*	0	*83.1*	*45-124*	31.56	*14.2*	*50*	

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **165838** Instrument ID **GC12** Method: **SW8081A**

MBLK	Sample ID: **PBLKS1-165838-165838**				Units: **µg/Kg**			Analysis Date: **10/13/2020 01:44 PM**		
Client ID:		Run ID: **GC12_201013A**			SeqNo: **6793757**		Prep Date: **10/13/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	ND	10								
4,4´-DDE	ND	10								
4,4´-DDT	ND	10								
Aldrin	ND	10								
alpha-BHC	ND	10								
alpha-Chlordane	ND	10								
beta-BHC	ND	10								
Chlordane, Technical	ND	25								
delta-BHC	ND	10								
Dieldrin	ND	10								
Endosulfan I	ND	10								
Endosulfan II	ND	10								
Endosulfan sulfate	ND	10								
Endrin	ND	10								
Endrin aldehyde	ND	10								
Endrin ketone	ND	10								
gamma-BHC (Lindane)	ND	10								
gamma-Chlordane	ND	10								
Heptachlor	ND	10								
Heptachlor epoxide	ND	10								
Methoxychlor	ND	10								
Toxaphene	ND	60								
Surr: Decachlorobiphenyl	*31.17*	0	*33.3*	0	*93.6*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*31.83*	0	*33.3*	0	*95.6*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **165838** Instrument ID **GC12** Method: **SW8081A**

LCS	Sample ID: **PLCSS1-165838-165838**				Units: **µg/Kg**			Analysis Date: **10/13/2020 01:58 PM**		
Client ID:	Run ID: **GC12_201013A**				SeqNo: **6793758**		Prep Date: **10/13/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	28.28	10	33.33	0	84.9	50-150	0			
4,4´-DDE	30.07	10	33.33	0	90.2	50-150	0			
4,4´-DDT	31.1	10	33.33	0	93.3	50-150	0			
Aldrin	30.9	10	33.33	0	92.7	50-150	0			
alpha-BHC	31.83	10	33.33	0	95.5	50-150	0			
alpha-Chlordane	30.72	10	33.33	0	92.2	50-150	0			
beta-BHC	30.33	10	33.33	0	91	50-150	0			
delta-BHC	32	10	33.33	0	96	50-150	0			
Dieldrin	31.22	10	33.33	0	93.7	50-150	0			
Endosulfan I	30.6	10	33.33	0	91.8	50-150	0			
Endosulfan II	30.33	10	33.33	0	91	50-150	0			
Endosulfan sulfate	29	10	33.33	0	87	50-150	0			
Endrin	32.47	10	33.33	0	97.4	50-150	0			
Endrin aldehyde	30.83	10	33.33	0	92.5	50-150	0			
Endrin ketone	29.9	10	33.33	0	89.7	50-150	0			
gamma-BHC (Lindane)	31.27	10	33.33	0	93.8	50-150	0			
gamma-Chlordane	29.78	10	33.33	0	89.4	50-150	0			
Heptachlor	30.73	10	33.33	0	92.2	50-150	0			
Heptachlor epoxide	31.02	10	33.33	0	93.1	50-150	0			
Methoxychlor	29.02	10	33.33	0	87.1	50-150	0			
Surr: Decachlorobiphenyl	*30.12*	0	*33.3*	0	*90.4*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.53*	0	*33.3*	0	*91.7*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165838** Instrument ID **GC12** Method: **SW8081A**

MS Sample ID: **20100478-01C MS** Units: **µg/Kg** Analysis Date: **10/13/2020 02:13 PM**
Client ID: **Wildwood 02** Run ID: **GC12_201013A** SeqNo: **6793759** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	12.14	9.9	32.93	0	36.9	50-150	0			S
4,4´-DDE	13.26	9.9	32.93	0	40.3	50-150	0			S
4,4´-DDT	13.87	9.9	32.93	0	42.1	50-150	0			S
Aldrin	13.77	9.9	32.93	0	41.8	50-150	0			S
alpha-BHC	14	9.9	32.93	0	42.5	50-150	0			S
alpha-Chlordane	13.08	9.9	32.93	0	39.7	50-150	0			S
beta-BHC	12.04	9.9	32.93	0	36.6	50-150	0			S
delta-BHC	11.63	9.9	32.93	0	35.3	50-150	0			S
Dieldrin	12.55	9.9	32.93	0	38.1	50-150	0			S
Endosulfan I	12.53	9.9	32.93	0	38.1	50-150	0			S
Endosulfan II	10.57	9.9	32.93	0	32.1	50-150	0			S
Endosulfan sulfate	9.551	9.9	32.93	0	29	50-150	0			JS
Endrin	11.71	9.9	32.93	0	35.6	50-150	0			S
Endrin aldehyde	9.568	9.9	32.93	0	29.1	50-150	0			JS
Endrin ketone	10.33	9.9	32.93	0	31.4	50-150	0			S
gamma-BHC (Lindane)	13.55	9.9	32.93	0	41.2	50-150	0			S
gamma-Chlordane	12.42	9.9	32.93	0	37.7	50-150	0			S
Heptachlor	13.59	9.9	32.93	0	41.3	50-150	0			S
Heptachlor epoxide	12.8	9.9	32.93	0	38.9	50-150	0			S
Methoxychlor	10.23	9.9	32.93	0	31.1	50-150	0			S
Surr: Decachlorobiphenyl	*13.85*	0	*32.9*	0	*42.1*	*50-150*	0			*S*
Surr: Tetrachloro-m-xylene	*14.52*	0	*32.9*	0	*44.1*	*50-150*	0			*S*

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165838** Instrument ID **GC12** Method: **SW8081A**

MSD Sample ID: **20100478-01C MSD** Units: **µg/Kg** Analysis Date: **10/13/2020 02:28 PM**
Client ID: **Wildwood 02** Run ID: **GC12_201013A** SeqNo: **6793760** Prep Date: **10/13/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	14.27	10	33.26	0	42.9	50-150	12.14	16.2	35	S
4,4´-DDE	16.02	10	33.26	0	48.2	50-150	13.26	18.9	35	S
4,4´-DDT	15.65	10	33.26	0	47.1	50-150	13.87	12.1	35	S
Aldrin	16.58	10	33.26	0	49.9	50-150	13.77	18.5	35	S
alpha-BHC	16.71	10	33.26	0	50.3	50-150	14	17.7	35	
alpha-Chlordane	15.45	10	33.26	0	46.5	50-150	13.08	16.7	35	S
beta-BHC	13.95	10	33.26	0	42	50-150	12.04	14.7	35	S
delta-BHC	13.17	10	33.26	0	39.6	50-150	11.63	12.5	35	S
Dieldrin	14.72	10	33.26	0	44.3	50-150	12.55	15.9	35	S
Endosulfan I	14.7	10	33.26	0	44.2	50-150	12.53	15.9	35	S
Endosulfan II	11.74	10	33.26	0	35.3	50-150	10.57	10.5	35	S
Endosulfan sulfate	10.16	10	33.26	0	30.6	50-150	9.551	6.19	35	S
Endrin	13.42	10	33.26	0	40.4	50-150	11.71	13.6	35	S
Endrin aldehyde	10.34	10	33.26	0	31.1	50-150	9.568	7.8	35	S
Endrin ketone	11.34	10	33.26	0	34.1	50-150	10.33	9.39	35	S
gamma-BHC (Lindane)	16.05	10	33.26	0	48.3	50-150	13.55	16.9	35	S
gamma-Chlordane	14.75	10	33.26	0	44.4	50-150	12.42	17.2	35	S
Heptachlor	16.43	10	33.26	0	49.4	50-150	13.59	19	35	S
Heptachlor epoxide	15.12	10	33.26	0	45.5	50-150	12.8	16.6	35	S
Methoxychlor	11.63	10	33.26	0	35	50-150	10.23	12.8	35	S
Surr: Decachlorobiphenyl	*16.63*	0	*33.23*	0	*50.1*	*50-150*	13.85	*18.3*	*35*	
Surr: Tetrachloro-m-xylene	*17.73*	0	*33.23*	0	*53.4*	*50-150*	14.52	*19.9*	*35*	

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165525** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-165525-165525** Units: **mg/Kg** Analysis Date: **10/7/2020 01:54 PM**
Client ID: Run ID: **HG4_201007A** SeqNo: **6768652** Prep Date: **10/7/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-165525-165525** Units: **mg/Kg** Analysis Date: **10/7/2020 01:55 PM**
Client ID: Run ID: **HG4_201007A** SeqNo: **6768653** Prep Date: **10/7/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.175	0.020	0.1665	0	105	80-120	0			

MS Sample ID: **20100015-01CMS** Units: **mg/Kg** Analysis Date: **10/7/2020 02:04 PM**
Client ID: Run ID: **HG4_201007A** SeqNo: **6768658** Prep Date: **10/7/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1392	0.016	0.1337	0.0007853	104	75-125	0			

MSD Sample ID: **20100015-01CMSD** Units: **mg/Kg** Analysis Date: **10/7/2020 02:06 PM**
Client ID: Run ID: **HG4_201007A** SeqNo: **6768659** Prep Date: **10/7/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1403	0.016	0.1328	0.0007853	105	75-125	0.1392	0.765	35	

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165694** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK	Sample ID: **MBLK-165694-165694**				Units: **mg/Kg**			Analysis Date: **10/9/2020 10:36 PM**		
Client ID:	Run ID: **ICPMS3_201009B**				SeqNo: **6779119**		Prep Date: **10/9/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	2.0								
Antimony	ND	0.25								
Arsenic	ND	0.25								
Barium	ND	0.25								
Beryllium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	25								
Chromium	ND	0.25								
Cobalt	ND	0.25								
Copper	ND	0.25								
Iron	ND	10								
Lead	ND	0.25								
Magnesium	ND	10								
Manganese	ND	0.25								
Nickel	ND	0.25								
Potassium	ND	10								
Selenium	ND	0.25								
Silver	ND	0.25								
Sodium	ND	15								
Thallium	ND	0.25								
Vanadium	ND	0.25								
Zinc	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165694** Instrument ID **ICPMS3** Method: **SW6020B**

LCS	Sample ID: **LCS-165694-165694**				Units: **mg/Kg**			Analysis Date: **10/9/2020 10:38 PM**			
Client ID:		Run ID: **ICPMS3_201009B**			SeqNo: **6779120**			Prep Date: **10/9/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	5.203	2.0	5	0	104	80-120	0			
Antimony	4.9	0.25	5	0	98	80-120	0			
Arsenic	4.921	0.25	5	0	98.4	80-120	0			
Barium	4.966	0.25	5	0	99.3	80-120	0			
Beryllium	5.091	0.10	5	0	102	80-120	0			
Cadmium	5.02	0.10	5	0	100	80-120	0			
Calcium	518.3	25	500	0	104	80-120	0			
Chromium	5.072	0.25	5	0	101	80-120	0			
Cobalt	5.089	0.25	5	0	102	80-120	0			
Copper	4.999	0.25	5	0	100	80-120	0			
Iron	508.9	10	500	0	102	80-120	0			
Lead	5.074	0.25	5	0	101	80-120	0			
Magnesium	509.7	10	500	0	102	80-120	0			
Manganese	4.861	0.25	5	0	97.2	80-120	0			
Nickel	5.036	0.25	5	0	101	80-120	0			
Potassium	520.7	10	500	0	104	80-120	0			
Selenium	4.804	0.25	5	0	96.1	80-120	0			
Silver	5.152	0.25	5	0	103	80-120	0			
Sodium	521	15	500	0	104	80-120	0			
Thallium	4.794	0.25	5	0	95.9	80-120	0			
Vanadium	5.209	0.25	5	0	104	80-120	0			
Zinc	4.957	0.50	5	0	99.1	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **165694** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: **20100446-01BMS** Units: **mg/Kg** Analysis Date: **10/9/2020 10:42 PM**
Client ID: Run ID: **ICPMS3_201009B** SeqNo: **6779122** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	8635	2.9	7.364	5150	47300	75-125	0			SEO
Antimony	5.634	0.37	7.364	0.1732	74.2	75-125	0			S
Arsenic	11.13	0.37	7.364	4.465	90.5	75-125	0			
Barium	58.23	0.37	7.364	37.55	281	75-125	0			SO
Beryllium	7.956	0.15	7.364	0.3284	104	75-125	0			
Cadmium	6.271	0.15	7.364	0.05502	84.4	75-125	0			
Calcium	18890	37	736.4	35490	-2250	75-125	0			SEO
Chromium	20.43	0.37	7.364	10.46	135	75-125	0			S
Cobalt	11.77	0.37	7.364	4.552	98.1	75-125	0			
Iron	14280	15	736.4	10880	461	75-125	0			SEO
Lead	17.61	0.37	7.364	11.82	78.6	75-125	0			
Magnesium	7717	15	736.4	8847	-153	75-125	0			SO
Nickel	20.12	0.37	7.364	11.54	117	75-125	0			
Potassium	2155	15	736.4	830.2	180	75-125	0			S
Selenium	6.056	0.37	7.364	0.2741	78.5	75-125	0			
Silver	6.213	0.37	7.364	0.02166	84.1	75-125	0			
Sodium	1315	22	736.4	481.4	113	75-125	0			
Thallium	7.131	0.37	7.364	0.1393	95	75-125	0			
Vanadium	32.73	0.37	7.364	16.96	214	75-125	0			S
Zinc	39.02	0.74	7.364	28.79	139	75-125	0			S

MS Sample ID: **20100446-01BMS** Units: **mg/Kg** Analysis Date: **10/11/2020 02:20 PM**
Client ID: Run ID: **ICPMS3_201011B** SeqNo: **6781099** Prep Date: **10/9/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	20.9	3.7	7.364	15.39	74.9	75-125	0			S
Manganese	287.6	3.7	7.364	276.5	151	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165694** Instrument ID **ICPMS3** Method: **SW6020B**

MSD Sample ID: **20100446-01BMSD** Units: **mg/Kg** Analysis Date: **10/9/2020 10:44 PM**
Client ID: Run ID: **ICPMS3_201009B** SeqNo: **6779123** Prep Date: **10/9/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	9140	3.0	7.474	5150	53400	75-125	8635	5.68	20	SEO
Antimony	5.815	0.37	7.474	0.1732	75.5	75-125	5.634	3.15	20	
Arsenic	11.75	0.37	7.474	4.465	97.5	75-125	11.13	5.4	20	
Barium	62.7	0.37	7.474	37.55	337	75-125	58.23	7.4	20	SO
Beryllium	8.34	0.15	7.474	0.3284	107	75-125	7.956	4.71	20	
Cadmium	6.411	0.15	7.474	0.05502	85	75-125	6.271	2.21	20	
Calcium	26020	37	747.4	35490	-1270	75-125	18890	31.7	20	SREO
Chromium	20.92	0.37	7.474	10.46	140	75-125	20.43	2.39	20	S
Cobalt	11.93	0.37	7.474	4.552	98.7	75-125	11.77	1.28	20	
Iron	14860	15	747.4	10880	532	75-125	14280	3.96	20	SEO
Lead	17.97	0.37	7.474	11.82	82.2	75-125	17.61	2	20	
Magnesium	7654	15	747.4	8847	-160	75-125	7717	0.824	20	SO
Nickel	19.92	0.37	7.474	11.54	112	75-125	20.12	1	20	
Potassium	2358	15	747.4	830.2	204	75-125	2155	9.01	20	S
Selenium	6.236	0.37	7.474	0.2741	79.8	75-125	6.056	2.94	20	
Silver	6.408	0.37	7.474	0.02166	85.4	75-125	6.213	3.09	20	
Sodium	1393	22	747.4	481.4	122	75-125	1315	5.79	20	
Thallium	7.42	0.37	7.474	0.1393	97.4	75-125	7.131	3.97	20	
Vanadium	34.68	0.37	7.474	16.96	237	75-125	32.73	5.78	20	S
Zinc	39.45	0.75	7.474	28.79	143	75-125	39.02	1.1	20	S

MSD Sample ID: **20100446-01BMSD** Units: **mg/Kg** Analysis Date: **10/11/2020 02:22 PM**
Client ID: Run ID: **ICPMS3_201011B** SeqNo: **6781100** Prep Date: **10/9/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	20.12	3.7	7.474	15.39	63.4	75-125	20.9	3.8	20	S
Manganese	254.4	3.7	7.474	276.5	-296	75-125	287.6	12.3	20	SO

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK	Sample ID: **SBLKS1-165526-165526**				Units: **µg/Kg**			Analysis Date: **10/9/2020 05:56 PM**	
Client ID:	Run ID: **SVMS8_201009A**				SeqNo: **6782702**	Prep Date: **10/8/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	ND	33								
2,4,5-Trichlorophenol	ND	33								
2,4,6-Trichlorophenol	ND	33								
2,4-Dichlorophenol	ND	33								
2,4-Dimethylphenol	ND	33								
2,4-Dinitrophenol	ND	33								
2,4-Dinitrotoluene	ND	33								
2,6-Dinitrotoluene	ND	33								
2-Chloronaphthalene	ND	6.7								
2-Chlorophenol	ND	33								
2-Methylnaphthalene	ND	6.7								
2-Methylphenol	ND	33								
2-Nitroaniline	ND	33								
2-Nitrophenol	ND	33								
3&4-Methylphenol	ND	33								
3,3´-Dichlorobenzidine	ND	170								
3-Nitroaniline	ND	33								
4,6-Dinitro-2-methylphenol	ND	33								
4-Bromophenyl phenyl ether	ND	33								
4-Chloro-3-methylphenol	ND	33								
4-Chloroaniline	ND	67								
4-Chlorophenyl phenyl ether	ND	33								
4-Nitroaniline	ND	170								
4-Nitrophenol	ND	33								
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Acetophenone	ND	33								
Anthracene	ND	6.7								
Atrazine	ND	33								
Benzaldehyde	ND	67								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Bis(2-chloroethoxy)methane	ND	33								
Bis(2-chloroethyl)ether	ND	33								
Bis(2-chloroisopropyl)ether	ND	33								
Bis(2-ethylhexyl)phthalate	ND	33								
Butyl benzyl phthalate	ND	33								
Caprolactam	ND	33								
Carbazole	ND	33								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	ND	6.7					
Dibenzo(a,h)anthracene	ND	6.7					
Dibenzofuran	ND	33					
Diethyl phthalate	ND	33					
Dimethyl phthalate	ND	33					
Di-n-butyl phthalate	ND	33					
Di-n-octyl phthalate	ND	33					
Fluoranthene	ND	6.7					
Fluorene	ND	6.7					
Hexachlorobenzene	ND	33					
Hexachlorobutadiene	ND	33					
Hexachlorocyclopentadiene	ND	33					
Hexachloroethane	ND	33					
Indeno(1,2,3-cd)pyrene	ND	6.7					
Isophorone	ND	170					
Naphthalene	ND	6.7					
Nitrobenzene	ND	170					
N-Nitrosodi-n-propylamine	ND	33					
N-Nitrosodiphenylamine	ND	33					
Pentachlorophenol	ND	33					
Phenanthrene	ND	6.7					
Phenol	ND	33					
Pyrene	ND	6.7					
Surr: 2,4,6-Tribromophenol	*2351*	0	*3333*	0	*70.5*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2550*	0	*3333*	0	*76.5*	*44-107*	0
Surr: 2-Fluorophenol	*2108*	0	*3333*	0	*63.2*	*37-109*	0
Surr: 4-Terphenyl-d14	*3332*	0	*3333*	0	*100*	*52-123*	0
Surr: Nitrobenzene-d5	*2371*	0	*3333*	0	*71.1*	*41-94*	0
Surr: Phenol-d6	*2622*	0	*3333*	0	*78.7*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS	Sample ID: **SLCSS1-165526-165526**				Units: **µg/Kg**			Analysis Date: **10/9/2020 06:18 PM**			
Client ID:		Run ID: **SVMS8_201009A**			SeqNo: **6782703**			Prep Date: **10/8/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1101	33	1333	0	82.6	53-97	0			
2,4,5-Trichlorophenol	1053	33	1333	0	79	52-111	0			
2,4,6-Trichlorophenol	1081	33	1333	0	81.1	46-105	0			
2,4-Dichlorophenol	1097	33	1333	0	82.3	47-96	0			
2,4-Dimethylphenol	1070	33	1333	0	80.3	49-97	0			
2,4-Dinitrophenol	628.7	33	1333	0	47.2	10-106	0			
2,4-Dinitrotoluene	1143	33	1333	0	85.7	58-110	0			
2,6-Dinitrotoluene	1164	33	1333	0	87.3	59-108	0			
2-Chloronaphthalene	1072	6.7	1333	0	80.4	56-104	0			
2-Chlorophenol	1030	33	1333	0	77.3	50-104	0			
2-Methylnaphthalene	1069	6.7	1333	0	80.2	54-96	0			
2-Methylphenol	1073	33	1333	0	80.5	49-105	0			
2-Nitroaniline	1111	33	1333	0	83.3	54-107	0			
2-Nitrophenol	1059	33	1333	0	79.4	51-94	0			
3&4-Methylphenol	1077	33	1333	0	80.8	48-105	0			
3,3´-Dichlorobenzidine	985.3	170	1333	0	73.9	39-99	0			
3-Nitroaniline	765.3	33	1333	0	57.4	17-92	0			
4,6-Dinitro-2-methylphenol	1009	33	1333	0	75.7	32-103	0			
4-Bromophenyl phenyl ether	1204	33	1333	0	90.3	60-106	0			
4-Chloro-3-methylphenol	1145	33	1333	0	85.9	51-101	0			
4-Chloroaniline	1105	67	1333	0	82.9	27-110	0			
4-Chlorophenyl phenyl ether	1182	33	1333	0	88.7	58-106	0			
4-Nitroaniline	670	170	1333	0	50.3	21-100	0			
4-Nitrophenol	820.7	33	1333	0	61.6	29-120	0			
Acenaphthene	1069	6.7	1333	0	80.2	55-101	0			
Acenaphthylene	1132	6.7	1333	0	84.9	59-106	0			
Acetophenone	1040	33	1333	0	78	51-100	0			
Anthracene	1192	6.7	1333	0	89.4	67-105	0			
Atrazine	1213	33	1333	0	91	45-125	0			
Benzaldehyde	376.7	67	1333	0	28.3	10-120	0			
Benzo(a)anthracene	1229	6.7	1333	0	92.2	68-105	0			
Benzo(a)pyrene	1254	6.7	1333	0	94.1	68-110	0			
Benzo(b)fluoranthene	1261	6.7	1333	0	94.6	65-110	0			
Benzo(g,h,i)perylene	1228	6.7	1333	0	92.1	60-120	0			
Benzo(k)fluoranthene	1270	6.7	1333	0	95.3	66-113	0			
Bis(2-chloroethoxy)methane	1089	33	1333	0	81.7	53-96	0			
Bis(2-chloroethyl)ether	1068	33	1333	0	80.1	47-108	0			
Bis(2-chloroisopropyl)ether	991.3	33	1333	0	74.4	47-107	0			
Bis(2-ethylhexyl)phthalate	1279	33	1333	0	96	59-117	0			
Butyl benzyl phthalate	1225	33	1333	0	91.9	59-106	0			
Caprolactam	1092	33	1333	0	81.9	42-105	0			
Carbazole	1189	33	1333	0	89.2	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	1209	6.7	1333	0	90.7	68-108	0
Dibenzo(a,h)anthracene	1183	6.7	1333	0	88.8	62-119	0
Dibenzofuran	1149	33	1333	0	86.2	60-104	0
Diethyl phthalate	1161	33	1333	0	87.1	62-111	0
Dimethyl phthalate	1165	33	1333	0	87.4	62-106	0
Di-n-butyl phthalate	1219	33	1333	0	91.5	59-105	0
Di-n-octyl phthalate	1372	33	1333	0	103	51-123	0
Fluoranthene	1173	6.7	1333	0	88	67-106	0
Fluorene	1125	6.7	1333	0	84.4	59-107	0
Hexachlorobenzene	1186	33	1333	0	89	62-103	0
Hexachlorobutadiene	1016	33	1333	0	76.2	51-94	0
Hexachlorocyclopentadiene	1098	33	1333	0	82.4	25-120	0
Hexachloroethane	992	33	1333	0	74.4	55-93	0
Indeno(1,2,3-cd)pyrene	1223	6.7	1333	0	91.8	56-120	0
Isophorone	1111	170	1333	0	83.3	52-99	0
Naphthalene	1047	6.7	1333	0	78.5	46-98	0
Nitrobenzene	1038	170	1333	0	77.9	53-95	0
N-Nitrosodi-n-propylamine	1096	33	1333	0	82.2	50-104	0
N-Nitrosodiphenylamine	1218	33	1333	0	91.4	63-107	0
Pentachlorophenol	996	33	1333	0	74.7	34-106	0
Phenanthrene	1184	6.7	1333	0	88.8	66-101	0
Phenol	1035	33	1333	0	77.6	44-109	0
Pyrene	1327	6.7	1333	0	99.6	60-119	0
Surr: 2,4,6-Tribromophenol	*2803*	0	*3333*	0	*84.1*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2649*	0	*3333*	0	*79.5*	*44-107*	0
Surr: 2-Fluorophenol	*2293*	0	*3333*	0	*68.8*	*37-109*	0
Surr: 4-Terphenyl-d14	*3073*	0	*3333*	0	*92.2*	*52-123*	0
Surr: Nitrobenzene-d5	*2589*	0	*3333*	0	*77.7*	*41-94*	0
Surr: Phenol-d6	*2692*	0	*3333*	0	*80.8*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

MS	Sample ID: **20100329-01B MS**				Units: **µg/Kg**		Analysis Date: **10/9/2020 06:57 PM**			
Client ID:		Run ID: **SVMS8_201009A**			SeqNo: **6782704**		Prep Date: **10/8/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1125	320	1292	0	87	53-97	0			
2,4,5-Trichlorophenol	1144	320	1292	0	88.5	52-111	0			
2,4,6-Trichlorophenol	1151	320	1292	0	89	46-105	0			
2,4-Dichlorophenol	1067	320	1292	0	82.5	47-96	0			
2,4-Dimethylphenol	1073	320	1292	0	83	49-97	0			
2,4-Dinitrophenol	646.4	320	1292	0	50	10-106	0			
2,4-Dinitrotoluene	1099	320	1292	0	85	58-110	0			
2,6-Dinitrotoluene	1176	320	1292	0	91	59-108	0			
2-Chloronaphthalene	1067	65	1292	0	82.5	56-104	0			
2-Chlorophenol	1099	320	1292	0	85	50-104	0			
2-Methylnaphthalene	1086	65	1292	0	84	54-96	0			
2-Methylphenol	1105	320	1292	0	85.5	49-105	0			
2-Nitroaniline	1073	320	1292	0	83	54-107	0			
2-Nitrophenol	1067	320	1292	0	82.5	51-94	0			
3&4-Methylphenol	1092	320	1292	0	84.5	48-105	0			
3,3´-Dichlorobenzidine	775.6	1,600	1292	0	60	39-99	0			J
3-Nitroaniline	911.4	320	1292	0	70.5	17-92	0			
4,6-Dinitro-2-methylphenol	853.2	320	1292	0	66	32-103	0			
4-Bromophenyl phenyl ether	1073	320	1292	0	83	60-106	0			
4-Chloro-3-methylphenol	1092	320	1292	0	84.5	51-101	0			
4-Chloroaniline	581.7	650	1292	0	45	27-110	0			J
4-Chlorophenyl phenyl ether	1144	320	1292	0	88.5	58-106	0			
4-Nitroaniline	969.6	1,600	1292	0	75	21-100	0			J
4-Nitrophenol	795	320	1292	0	61.5	29-120	0			
Acenaphthene	1041	65	1292	0	80.5	55-101	0			
Acenaphthylene	1054	65	1292	0	81.5	59-106	0			
Acetophenone	1125	320	1292	0	87	51-100	0			
Anthracene	1131	65	1292	0	87.5	67-105	0			
Atrazine	1131	320	1292	0	87.5	45-125	0			
Benzaldehyde	517.1	650	1292	0	40	10-120	0			J
Benzo(a)anthracene	1312	65	1292	234.7	83.4	68-105	0			
Benzo(a)pyrene	1286	65	1292	241.2	80.9	68-110	0			
Benzo(b)fluoranthene	1338	65	1292	378.1	74.3	65-110	0			
Benzo(g,h,i)perylene	1209	65	1292	254.2	73.9	60-120	0			
Benzo(k)fluoranthene	1215	65	1292	143.4	82.9	66-113	0			
Bis(2-chloroethoxy)methane	1086	320	1292	0	84	53-96	0			
Bis(2-chloroethyl)ether	1151	320	1292	0	89	47-108	0			
Bis(2-chloroisopropyl)ether	1067	320	1292	0	82.5	47-107	0			
Bis(2-ethylhexyl)phthalate	1338	320	1292	0	104	59-117	0			
Butyl benzyl phthalate	1299	320	1292	0	101	59-106	0			
Caprolactam	1189	320	1292	0	92	42-105	0			
Carbazole	1125	320	1292	0	87	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	1286	65	1292	221.6	82.4	68-108	0	
Dibenzo(a,h)anthracene	963.1	65	1292	0	74.5	62-119	0	
Dibenzofuran	1144	320	1292	0	88.5	60-104	0	
Diethyl phthalate	1092	320	1292	0	84.5	62-111	0	
Dimethyl phthalate	1151	320	1292	0	89	62-106	0	
Di-n-butyl phthalate	1228	320	1292	0	95	59-105	0	
Di-n-octyl phthalate	1325	320	1292	0	103	51-123	0	
Fluoranthene	1487	65	1292	482.4	77.7	67-106	0	
Fluorene	1125	65	1292	0	87	59-107	0	
Hexachlorobenzene	1131	320	1292	0	87.5	62-103	0	
Hexachlorobutadiene	1015	320	1292	0	78.5	51-94	0	
Hexachlorocyclopentadiene	665.8	320	1292	0	51.5	25-120	0	
Hexachloroethane	1041	320	1292	0	80.5	55-93	0	
Indeno(1,2,3-cd)pyrene	1105	65	1292	293.4	62.8	56-120	0	
Isophorone	1041	1,600	1292	0	80.5	52-99	0	J
Naphthalene	1092	65	1292	0	84.5	46-98	0	
Nitrobenzene	1021	1,600	1292	0	79	53-95	0	J
N-Nitrosodi-n-propylamine	1125	320	1292	0	87	50-104	0	
N-Nitrosodiphenylamine	1112	320	1292	0	86	63-107	0	
Pentachlorophenol	1002	320	1292	0	77.5	34-106	0	
Phenanthrene	1273	65	1292	208.6	82.4	66-101	0	
Phenol	1067	320	1292	0	82.5	44-109	0	
Pyrene	1603	65	1292	462.8	88.2	60-119	0	
Surr: 2,4,6-Tribromophenol	*2631*	0	*3232*	0	*81.4*	*38-92*	0	
Surr: 2-Fluorobiphenyl	*2573*	0	*3232*	0	*79.6*	*44-107*	0	
Surr: 2-Fluorophenol	*2372*	0	*3232*	0	*73.4*	*37-109*	0	
Surr: 4-Terphenyl-d14	*2967*	0	*3232*	0	*91.8*	*52-123*	0	
Surr: Nitrobenzene-d5	*2501*	0	*3232*	0	*77.4*	*41-94*	0	
Surr: Phenol-d6	*2560*	0	*3232*	0	*79.2*	*28-111*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

MSD	Sample ID: **20100329-01B MSD**				Units: **µg/Kg**		Analysis Date: **10/9/2020 07:18 PM**			
Client ID:		Run ID: **SVMS8_201009A**			SeqNo: **6782705**		Prep Date: **10/8/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1152	330	1317	0	87.5	53-97	1125	2.43	30	
2,4,5-Trichlorophenol	1146	330	1317	0	87	52-111	1144	0.149	30	
2,4,6-Trichlorophenol	1179	330	1317	0	89.5	46-105	1151	2.42	30	
2,4-Dichlorophenol	1021	330	1317	0	77.5	47-96	1067	4.39	30	
2,4-Dimethylphenol	1106	330	1317	0	84	49-97	1073	3.06	30	
2,4-Dinitrophenol	579.5	330	1317	0	44	10-106	646.4	10.9	30	
2,4-Dinitrotoluene	1073	330	1317	0	81.5	58-110	1099	2.35	30	
2,6-Dinitrotoluene	1093	330	1317	0	83	59-108	1176	7.34	30	
2-Chloronaphthalene	1146	66	1317	0	87	56-104	1067	7.17	30	
2-Chlorophenol	1067	330	1317	0	81	50-104	1099	2.96	30	
2-Methylnaphthalene	1080	66	1317	0	82	54-96	1086	0.55	30	
2-Methylphenol	1073	330	1317	0	81.5	49-105	1105	2.93	30	
2-Nitroaniline	1100	330	1317	0	83.5	54-107	1073	2.46	30	
2-Nitrophenol	1060	330	1317	0	80.5	51-94	1067	0.594	30	
3&4-Methylphenol	1040	330	1317	0	79	48-105	1092	4.87	30	
3,3´-Dichlorobenzidine	869.2	1,600	1317	0	66	39-99	775.6	0	30	J
3-Nitroaniline	889	330	1317	0	67.5	17-92	911.4	2.49	30	
4,6-Dinitro-2-methylphenol	698	330	1317	0	53	32-103	853.2	20	30	
4-Bromophenyl phenyl ether	1172	330	1317	0	89	60-106	1073	8.83	30	
4-Chloro-3-methylphenol	1067	330	1317	0	81	51-101	1092	2.37	30	
4-Chloroaniline	605.8	660	1317	0	46	27-110	581.7	0	30	J
4-Chlorophenyl phenyl ether	1159	330	1317	0	88	58-106	1144	1.29	30	
4-Nitroaniline	1014	1,600	1317	0	77	21-100	969.6	0	30	J
4-Nitrophenol	717.8	330	1317	0	54.5	29-120	795	10.2	30	
Acenaphthene	1100	66	1317	0	83.5	55-101	1041	5.52	30	
Acenaphthylene	1152	66	1317	0	87.5	59-106	1054	8.96	30	
Acetophenone	1067	330	1317	0	81	51-100	1125	5.29	30	
Anthracene	1198	66	1317	0	91	67-105	1131	5.78	30	
Atrazine	1152	330	1317	0	87.5	45-125	1131	1.86	30	
Benzaldehyde	513.6	660	1317	0	39	10-120	517.1	0	30	J
Benzo(a)anthracene	1264	66	1317	234.7	78.2	68-105	1312	3.71	30	
Benzo(a)pyrene	1330	66	1317	241.2	82.7	68-110	1286	3.35	30	
Benzo(b)fluoranthene	1324	66	1317	378.1	71.8	65-110	1338	1.08	30	
Benzo(g,h,i)perylene	1396	66	1317	254.2	86.7	60-120	1209	14.4	30	
Benzo(k)fluoranthene	1231	66	1317	143.4	82.6	66-113	1215	1.33	30	
Bis(2-chloroethoxy)methane	1067	330	1317	0	81	53-96	1086	1.78	30	
Bis(2-chloroethyl)ether	1133	330	1317	0	86	47-108	1151	1.57	30	
Bis(2-chloroisopropyl)ether	1080	330	1317	0	82	47-107	1067	1.25	30	
Bis(2-ethylhexyl)phthalate	1310	330	1317	0	99.5	59-117	1338	2.08	30	
Butyl benzyl phthalate	1324	330	1317	0	101	59-106	1299	1.86	30	
Caprolactam	1106	330	1317	0	84	42-105	1189	7.23	30	
Carbazole	1179	330	1317	0	89.5	67-108	1125	4.69	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **165526** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	1330	66	1317	221.6	84.2	68-108	1286	3.35	30	
Dibenzo(a,h)anthracene	1205	66	1317	0	91.5	62-119	963.1	22.3	30	
Dibenzofuran	1225	330	1317	0	93	60-104	1144	6.82	30	
Diethyl phthalate	1139	330	1317	0	86.5	62-111	1092	4.2	30	
Dimethyl phthalate	1179	330	1317	0	89.5	62-106	1151	2.42	30	
Di-n-butyl phthalate	1238	330	1317	0	94	59-105	1228	0.801	30	
Di-n-octyl phthalate	1264	330	1317	0	96	51-123	1325	4.69	30	
Fluoranthene	1383	66	1317	482.4	68.4	67-106	1487	7.23	30	
Fluorene	1126	66	1317	0	85.5	59-107	1125	0.12	30	
Hexachlorobenzene	1238	330	1317	0	94	62-103	1131	9.02	30	
Hexachlorobutadiene	1067	330	1317	0	81	51-94	1015	4.99	30	
Hexachlorocyclopentadiene	691.4	330	1317	0	52.5	25-120	665.8	3.78	30	
Hexachloroethane	1040	330	1317	0	79	55-93	1041	0.0221	30	
Indeno(1,2,3-cd)pyrene	1343	66	1317	293.4	79.7	56-120	1105	19.4	30	
Isophorone	1100	1,600	1317	0	83.5	52-99	1041	0	30	J
Naphthalene	1100	66	1317	0	83.5	46-98	1092	0.669	30	
Nitrobenzene	1040	1,600	1317	0	79	53-95	1021	0	30	J
N-Nitrosodi-n-propylamine	1093	330	1317	0	83	50-104	1125	2.85	30	
N-Nitrosodiphenylamine	1205	330	1317	0	91.5	63-107	1112	8.05	30	
Pentachlorophenol	915.3	330	1317	0	69.5	34-106	1002	9.03	30	
Phenanthrene	1291	66	1317	208.6	82.2	66-101	1273	1.35	30	
Phenol	1139	330	1317	0	86.5	44-109	1067	6.59	30	
Pyrene	1561	66	1317	462.8	83.4	60-119	1603	2.68	30	
Surr: 2,4,6-Tribromophenol	*2706*	0	*3292*	0	*82.2*	*38-92*	2631	*2.84*	*40*	
Surr: 2-Fluorobiphenyl	*2785*	0	*3292*	0	*84.6*	*44-107*	2573	*7.95*	*40*	
Surr: 2-Fluorophenol	*2417*	0	*3292*	0	*73.4*	*37-109*	2372	*1.86*	*40*	
Surr: 4-Terphenyl-d14	*3128*	0	*3292*	0	*95*	*52-123*	2967	*5.28*	*40*	
Surr: Nitrobenzene-d5	*2634*	0	*3292*	0	*80*	*41-94*	2501	*5.16*	*40*	
Surr: Phenol-d6	*2575*	0	*3292*	0	*78.2*	*28-111*	2560	*0.589*	*40*	

The following samples were analyzed in this batch: 20100478-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: **VBLKS1-201016-R300509** Units: **µg/Kg** Analysis Date: **10/16/2020 12:03 PM**
Client ID: Run ID: **VMS8_201016A** SeqNo: **6800745** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1,2-Trichlorotrifluoroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2-D bromo-3-chloropropane	ND	5.0								
1,2-D bromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	10								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	10								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Cyclohexane	ND	10								
Dibromochloromethane	ND	5.0								
Dichlorodifluoromethane	ND	10								
Ethylbenzene	ND	5.0								
Isopropy benzene	ND	5.0								
Methyl acetate	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylcyclohexane	ND	10								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	5.0					
Surr: 1,2-Dichloroethane-d4	*19.33*	0	*20*	0	*96.6*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.06*	0	*20*	0	*100*	*83-111*	0
Surr: Dibromofluoromethane	*19.88*	0	*20*	0	*99.4*	*77-125*	0
Surr: Toluene-d8	*20.23*	0	*20*	0	*101*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

LCS	Sample ID: **VLCSS1-201016-R300509**				Units: **µg/Kg**		Analysis Date: **10/16/2020 11:13 AM**			
Client ID:	Run ID: **VMS8_201016A**				SeqNo: **6800744**		Prep Date:		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21	5.0	20	0	105	73-138	0			
1,1,2,2-Tetrachloroethane	20.57	5.0	20	0	103	71-126	0			
1,1,2-Trichloroethane	20.69	5.0	20	0	103	77-123	0			
1,1-Dichloroethane	20.39	5.0	20	0	102	63-148	0			
1,1-Dichloroethene	21.78	5.0	20	0	109	67-156	0			
1,2,4-Trichlorobenzene	18.74	5.0	20	0	93.7	70-132	0			
1,2-D bromo-3-chloropropane	20.02	5.0	20	0	100	48-127	0			
1,2-D bromoethane	22.52	5.0	20	0	113	71-144	0			
1,2-Dichlorobenzene	21.25	5.0	20	0	106	77-127	0			
1,2-Dichloroethane	20.28	5.0	20	0	101	77-127	0			
1,2-Dichloropropane	20.8	5.0	20	0	104	74-130	0			
1,3-Dichlorobenzene	22.57	5.0	20	0	113	75-133	0			
1,4-Dichlorobenzene	22.57	5.0	20	0	113	74-130	0			
2-Butanone	15.1	10	20	0	75.5	55-132	0			
4-Methyl-2-pentanone	26.63	5.0	20	0	133	67-159	0			
Acetone	17.6	10	20	0	88	31-156	0			
Benzene	21.83	5.0	20	0	109	77-133	0			
Bromodichloromethane	19.91	5.0	20	0	99.6	69-133	0			
Bromoform	19.48	5.0	20	0	97.4	55-126	0			
Bromomethane	39.01	10	20	0	195	31-174	0			S
Carbon disulfide	23.05	5.0	20	0	115	45-160	0			
Carbon tetrachloride	19.99	5.0	20	0	100	69-140	0			
Chlorobenzene	20.53	5.0	20	0	103	76-130	0			
Chloroethane	20.17	5.0	20	0	101	53-150	0			
Chloroform	18.55	5.0	20	0	92.8	72-132	0			
Chloromethane	17.54	10	20	0	87.7	43-150	0			
cis-1,2-Dichloroethene	20.01	5.0	20	0	100	74-134	0			
cis-1,3-Dichloropropene	20.44	5.0	20	0	102	62-134	0			
Dibromochloromethane	19.55	5.0	20	0	97.8	57-118	0			
Dichlorodifluoromethane	31.96	10	20	0	160	43-126	0			S
Ethylbenzene	24.58	5.0	20	0	123	75-133	0			
Isopropy benzene	24.17	5.0	20	0	121	74-137	0			
Methyl tert-butyl ether	19.28	5.0	20	0	96.4	62-136	0			
Methylene chloride	22.99	10	20	0	115	55-157	0			
Styrene	24.22	5.0	20	0	121	72-138	0			
Tetrachloroethene	20.01	5.0	20	0	100	70-171	0			
Toluene	22.55	5.0	20	0	113	76-130	0			
trans-1,2-Dichloroethene	21.54	5.0	20	0	108	65-137	0			
trans-1,3-Dichloropropene	20.22	5.0	20	0	101	58-126	0			
Trichloroethene	23.14	5.0	20	0	116	75-135	0			
Trichlorofluoromethane	17.47	5.0	20	0	87.4	62-136	0			
Vinyl chloride	22.83	5.0	20	0	114	57-143	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	72.93	5.0	60	0	122	75-132	0
Surr: 1,2-Dichloroethane-d4	*18*	0	*20*	0	*90*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.02*	0	*20*	0	*100*	*83-111*	0
Surr: Dibromofluoromethane	*19.06*	0	*20*	0	*95.3*	*77-125*	0
Surr: Toluene-d8	*20.15*	0	*20*	0	*101*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

MS Sample ID: **20101322-03A MS** Units: **µg/Kg** Analysis Date: **10/16/2020 06:02 PM**
Client ID: Run ID: **VMS8_201016A** SeqNo: **6800766** Prep Date: DF: **1.064**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	17.45	5.3	21.28	0	82	73-138	0			
1,1,2,2-Tetrachloroethane	18.4	5.3	21.28	0	86.5	71-126	0			
1,1,2-Trichloroethane	19.43	5.3	21.28	0	91.3	77-123	0			
1,1-Dichloroethane	17.61	5.3	21.28	0	82.8	63-148	0			
1,1-Dichloroethene	17.45	5.3	21.28	0	82	67-156	0			
1,2,4-Trichlorobenzene	16.16	5.3	21.28	0	76	70-132	0			
1,2-D bromo-3-chloropropane	19.12	5.3	21.28	0	89.9	48-127	0			
1,2-D bromoethane	20.3	5.3	21.28	0	95.4	71-144	0			
1,2-Dichlorobenzene	20.86	5.3	21.28	0	98	77-127	0			
1,2-Dichloroethane	19.34	5.3	21.28	0	90.9	77-127	0			
1,2-Dichloropropane	19.27	5.3	21.28	0	90.5	74-130	0			
1,3-Dichlorobenzene	19.74	5.3	21.28	0	92.8	75-133	0			
1,4-Dichlorobenzene	19.74	5.3	21.28	0	92.8	74-130	0			
2-Butanone	27.47	11	21.28	0	129	55-132	0			
4-Methyl-2-pentanone	27.44	5.3	21.28	0	129	67-159	0			
Acetone	42.78	11	21.28	0	201	31-156	0			S
Benzene	18.46	5.3	21.28	0	86.8	77-133	0			
Bromodichloromethane	19.12	5.3	21.28	0	89.9	69-133	0			
Bromoform	16.93	5.3	21.28	0	79.5	55-126	0			
Bromomethane	33.78	11	21.28	0	159	31-174	0			
Carbon disulfide	18.43	5.3	21.28	0	86.6	45-160	0			
Carbon tetrachloride	15.62	5.3	21.28	0	73.4	69-140	0			
Chlorobenzene	18.79	5.3	21.28	0	88.3	76-130	0			
Chloroethane	16.78	5.3	21.28	0	78.9	53-150	0			
Chloroform	17.25	5.3	21.28	0	81	72-132	0			
Chloromethane	15.14	11	21.28	0	71.1	43-150	0			
cis-1,2-Dichloroethene	18.02	5.3	21.28	0	84.7	74-134	0			
cis-1,3-Dichloropropene	18.77	5.3	21.28	0	88.2	62-134	0			
Dibromochloromethane	18.59	5.3	21.28	0	87.4	57-118	0			
Dichlorodifluoromethane	24.98	11	21.28	0	117	43-126	0			
Ethylbenzene	20.64	5.3	21.28	0	97	75-133	0			
Isopropy benzene	19.33	5.3	21.28	0	90.9	74-137	0			
Methyl tert-butyl ether	19.94	5.3	21.28	0	93.7	62-136	0			
Methylene chloride	19.58	11	21.28	2.364	80.9	55-157	0			
Styrene	21.93	5.3	21.28	0	103	72-138	0			
Tetrachloroethene	16.77	5.3	21.28	0	78.8	70-171	0			
Toluene	20.34	5.3	21.28	0.821	91.7	76-130	0			
trans-1,2-Dichloroethene	17.56	5.3	21.28	0	82.5	65-137	0			
trans-1,3-Dichloropropene	18.49	5.3	21.28	0	86.9	58-126	0			
Trichloroethene	18.23	5.3	21.28	0	85.6	75-135	0			
Trichlorofluoromethane	13.97	5.3	21.28	0	65.6	62-136	0			
Vinyl chloride	18.47	5.3	21.28	0	86.8	57-143	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	63.06	5.3	63.84	0	98.8	75-132	0
Surr: 1,2-Dichloroethane-d4	*19.51*	0	*21.28*	0	*91.7*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.84*	0	*21.28*	0	*98*	*83-111*	0
Surr: Dibromofluoromethane	*20.4*	0	*21.28*	0	*95.9*	*77-125*	0
Surr: Toluene-d8	*21.77*	0	*21.28*	0	*102*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

MSD Sample ID: **20101322-03A MSD** Units: **µg/Kg** Analysis Date: **10/16/2020 06:19 PM**
Client ID: Run ID: **VMS8_201016A** SeqNo: **6800767** Prep Date: DF: **1.235**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	23.85	6.2	24.7	0	96.5	73-138	17.45	31	30	R
1,1,2,2-Tetrachloroethane	24.21	6.2	24.7	0	98	71-126	18.4	27.3	30	
1,1,2-Trichloroethane	25.14	6.2	24.7	0	102	77-123	19.43	25.6	30	
1,1-Dichloroethane	26.26	6.2	24.7	0	106	63-148	17.61	39.4	30	R
1,1-Dichloroethene	26.11	6.2	24.7	0	106	67-156	17.45	39.8	30	R
1,2,4-Trichlorobenzene	19.18	6.2	24.7	0	77.7	70-132	16.16	17.1	30	
1,2-D bromo-3-chloropropane	25.45	6.2	24.7	0	103	48-127	19.12	28.4	30	
1,2-D bromoethane	26.52	6.2	24.7	0	107	71-144	20.3	26.5	30	
1,2-Dichlorobenzene	26.24	6.2	24.7	0	106	77-127	20.86	22.8	30	
1,2-Dichloroethane	24.8	6.2	24.7	0	100	77-127	19.34	24.7	30	
1,2-Dichloropropane	24.61	6.2	24.7	0	99.7	74-130	19.27	24.4	30	
1,3-Dichlorobenzene	26.17	6.2	24.7	0	106	75-133	19.74	28	30	
1,4-Dichlorobenzene	26.17	6.2	24.7	0	106	74-130	19.74	28	30	
2-Butanone	39.73	12	24.7	0	161	55-132	27.47	36.5	30	SR
4-Methyl-2-pentanone	36.99	6.2	24.7	0	150	67-159	27.44	29.6	30	
Acetone	65.47	12	24.7	0	265	31-156	42.78	41.9	30	SR
Benzene	25.27	6.2	24.7	0	102	77-133	18.46	31.1	30	R
Bromodichloromethane	25.19	6.2	24.7	0	102	69-133	19.12	27.4	30	
Bromoform	21.74	6.2	24.7	0	88	55-126	16.93	24.9	30	
Bromomethane	48.05	12	24.7	0	195	31-174	33.78	34.9	30	SR
Carbon disulfide	27.54	6.2	24.7	0	112	45-160	18.43	39.6	30	R
Carbon tetrachloride	21.69	6.2	24.7	0	87.8	69-140	15.62	32.5	30	R
Chlorobenzene	24.74	6.2	24.7	0	100	76-130	18.79	27.3	30	
Chloroethane	26.24	6.2	24.7	0	106	53-150	16.78	44	30	R
Chloroform	25.21	6.2	24.7	0	102	72-132	17.25	37.5	30	R
Chloromethane	22.03	12	24.7	0	89.2	43-150	15.14	37.1	30	R
cis-1,2-Dichloroethene	26.26	6.2	24.7	0	106	74-134	18.02	37.2	30	R
cis-1,3-Dichloropropene	24.68	6.2	24.7	0	99.9	62-134	18.77	27.2	30	
Dibromochloromethane	22.14	6.2	24.7	0	89.7	57-118	18.59	17.5	30	
Dichlorodifluoromethane	37.63	12	24.7	0	152	43-126	24.98	40.4	30	SR
Ethylbenzene	27.34	6.2	24.7	0	111	75-133	20.64	27.9	30	
Isopropy benzene	27.39	6.2	24.7	0	111	74-137	19.33	34.5	30	R
Methyl tert-butyl ether	27.4	6.2	24.7	0	111	62-136	19.94	31.5	30	R
Methylene chloride	27.39	12	24.7	2.364	101	55-157	19.58	33.3	30	R
Styrene	28.06	6.2	24.7	0	114	72-138	21.93	24.5	30	
Tetrachloroethene	22.17	6.2	24.7	0	89.7	70-171	16.77	27.7	30	
Toluene	25.92	6.2	24.7	0.821	102	76-130	20.34	24.1	30	
trans-1,2-Dichloroethene	26	6.2	24.7	0	105	65-137	17.56	38.8	30	R
trans-1,3-Dichloropropene	24.24	6.2	24.7	0	98.1	58-126	18.49	26.9	30	
Trichloroethene	25.11	6.2	24.7	0	102	75-135	18.23	31.8	30	R
Trichlorofluoromethane	21.3	6.2	24.7	0	86.3	62-136	13.97	41.6	30	R
Vinyl chloride	27.99	6.2	24.7	0	113	57-143	18.47	41	30	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R300509** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	84.07	6.2	74.1	0	113	75-132	63.06	28.6	30
Surr: 1,2-Dichloroethane-d4	*24.86*	0	*24.7*	0	*101*	*83-132*	19.51	*24.1*	*30*
Surr: 4-Bromofluorobenzene	*24.96*	0	*24.7*	0	*101*	*83-111*	20.84	*18*	*30*
Surr: Dibromofluoromethane	*25.77*	0	*24.7*	0	*104*	*77-125*	20.4	*23.3*	*30*
Surr: Toluene-d8	*24.37*	0	*24.7*	0	*98.7*	*86-108*	21.77	*11.3*	*30*

The following samples were analyzed in this batch: 20100478-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20100478
Project: Oronogo

QC BATCH REPORT

Batch ID: **R300488** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R300488** Units: **% of sample** Analysis Date: **10/15/2020 11:59 AM**
Client ID: Run ID: **MOIST_201015A** SeqNo: **6798150** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.10								

LCS Sample ID: **LCS-R300488** Units: **% of sample** Analysis Date: **10/15/2020 11:59 AM**
Client ID: Run ID: **MOIST_201015A** SeqNo: **6798149** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.10	100	0	100	98-102	0			

DUP Sample ID: **20100225-01A DUP** Units: **% of sample** Analysis Date: **10/15/2020 11:59 AM**
Client ID: Run ID: **MOIST_201015A** SeqNo: **6798135** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	6.21	0.10	0	0	0	0-0	17.72	96.2	10	R

DUP Sample ID: **20100389-01A DUP** Units: **% of sample** Analysis Date: **10/15/2020 11:59 AM**
Client ID: Run ID: **MOIST_201015A** SeqNo: **6798137** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.88	0.10	0	0	0	0-0	6.12	4	10	

The following samples were analyzed in this batch: 20100478-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 184724

ALS Project Manager: | ALS Work Order #: 20100478

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Oronogo	A	Volatiles - EPA 5035/8260
Work Order		Project Number	030319.0001	B	Semivolatiles - EPA 8270
Company Name	Environmental Quality Management, Inc	Bill To Company	Environmental Quality Management, In	C	Pesticides - EPA 8081
Send Report To	adragotta@eqm.com	Invoice Attn	Accounts Payable	D	PCB - EPA 8082
Address	1800 Carillon Blvd	Address	1800 Carillon Blvd	E	Metals - EPA 6010
				F	Herbicides - EPA 8151
City/State/Zip	Cincinnati, OH 45240	City/State/Zip	Cincinnati, OH 45240	G	
Phone	(513) 825-7500	Phone	(513) 825-7500	H	
Fax	(513) 825-7495	Fax	(513) 825-7495	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Wildwood 02	10/5/2020	8:15am	Soil	5,7,8	4	X	X	X	X	X	X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Results Due Date:
Harlan Smith Harlan Smith	FedEx	☒ 2 wk Days	

Relinquished by: Harlan Smith	Date: 10/5/2020	Time: 9:00 am	Received by: FEDEX	Notes:	
Relinquished by: FEDEX	Date: 10/6/20	Time: 1030	Received by (Laboratory):	Cooler ID	Cooler Temp.
Logged by (Laboratory): KR	Date: 10/6/20	Time: 1320	Checked by (Laboratory):	IR3	3.0°C

QC Package: (Check One Box Below)

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **EQM - CINCINNATI** Date/Time Received: **06-Oct-20 10:30**

Work Order: **20100478** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 06-Oct-20 (Date) Reviewed by: Bill Carey (eSignature) 07-Oct-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.0/4.0 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/6/2020 1:19:46 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

October 13, 2020

Mr. Bill Carey
ALS Environmental-Holland
3352 128th Avenue
Holland, MI 49424

Certificate of Analysis

Project Name:	**2020-HERBICIDES FULL LIST SOIL - RUSH**	Workorder:	**3133238**
Purchase Order:	**20-122019919**	Workorder ID:	**AEH081|20100478**

Dear Mr. Carey:

Enclosed are the analytical results for samples received by the laboratory on Thursday, October 8, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Brandon Frye

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3133238 AEH081|20100478

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3133238001	Wildwood 02	Solid	10/5/2020 08:15	10/8/2020 09:02	Collected by Client

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SAMPLE SUMMARY

Workorder: 3133238 AEH081|20100478

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All L brary Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Sp ke
MSD	Matrix Sp ke Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3133238 AEH081|20100478

Lab ID: **3133238001** Date Collected: 10/5/2020 08:15 Matrix: Solid

Sample ID: **Wildwood 02** Date Received: 10/8/2020 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
HERBICIDES										
2,4-D	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
2,4-DB	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Dalapon	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Dicamba	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Dichloroprop	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Dinoseb	ND		ug/kg	191	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Pentachlorophenol	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
2,4,5-T	ND		ug/kg	191	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
2,4,5-TP	ND		ug/kg	112	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	65.7		%	36 - 113	SW846 8151A	10/9/20 08:40	CXK	10/10/20 07:32	JXS	A
WET CHEMISTRY										
Moisture	12.5		%	0.1	S2540G-11			10/10/20 12:20	AXD	A
Total Solids	87.5		%	0.1	S2540G-11			10/10/20 12:20	AXD	A

Ms. Sarah S Leung
Project Coordinator

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3133238 AEH081|20100478

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3133238001	Wildwood 02	S2540G-11		
3133238001	Wildwood 02	SW846 8151A	SW846 8151A	

QUALITY CONTROL DATA

Workorder: 3133238 AEH081|20100478

QC Batch: EXTR/62175 **Analysis Method:** SW846 8151A

QC Batch Method: SW846 8151A

Associated Lab Samples: 3133238001

METHOD BLANK: 3213113

Parameter	Blank Result	Units	Reporting Limit
2,4-D	ND	ug/kg	100
2,4-DB	ND	ug/kg	100
Dalapon	ND	ug/kg	100
Dicamba	ND	ug/kg	100
Dichloroprop	ND	ug/kg	100
Dinoseb	ND	ug/kg	170
Pentachlorophenol	ND	ug/kg	100
2,4,5-T	ND	ug/kg	170
2,4,5-TP	ND	ug/kg	100
2,4-Dichlorophenylacetic acid (S)	49.9	%	36 - 113

LABORATORY CONTROL SAMPLE: 3213114

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
2,4-D	51.8	ug/kg	333	173	23 - 130
2,4-DB	54.8	ug/kg	333	183	10 - 130
Dalapon	26.8	ug/kg	333	ND	24 - 65
Dicamba	53.9	ug/kg	333	180	44 - 89
Dichloroprop	55.1	ug/kg	333	184	36 - 107
Dinoseb	66.9	ug/kg	333	223	25 - 100
Pentachlorophenol	64.1	ug/kg	333	214	43 - 90
2,4,5-T	54.1	ug/kg	333	180	22 - 132
2,4,5-TP	57	ug/kg	333	190	49 - 105
2,4-Dichlorophenylacetic acid (S)	63.4	%			36 - 113

MATRIX SPIKE: 3213115 DUPLICATE: 3213116 ORIGINAL: 3133155001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
2,4-D	0	ug/kg	328	158.7	142.091	48.4	43.2	23 - 130	11	34
2,4-DB	0	ug/kg	328	168.408	130.023	51.4	39.5	10 - 130	25.7	42

QUALITY CONTROL DATA

Workorder: 3133238 AEH081|20100478

Dalapon	0	ug/kg	328	141.459	175.511	43.1	53.4	24 - 65	21.5	35
Dicamba	0	ug/kg	328	223.651	187.263	68.2	56.9	44 - 89	17.7	24
Dichloroprop	0	ug/kg	328	141.155	129.634	43.1	39.4	36 - 107	8.51	26
Dinoseb	0	ug/kg	328	229.608	199.089	70	60.5	25 - 100	14.2	58
Pentachlorophenol	0	ug/kg	328	172.696	167.471	52.7	50.9	43 - 90	3.07	19
2,4,5-T	0	ug/kg	328	200.191	171.892	61.1	52.3	22 - 132	15.2	18
2,4,5-TP	0	ug/kg	328	165.491	145.026	50.5	44.1*	49 - 105	13.2	20
2,4-Dichlorophenylacetic acid (S)	70.5	%				70.5	61.4	36 - 113		

QUALITY CONTROL DATA

Workorder: 3133238 AEH081|20100478

QC Batch: WETC/245305 **Analysis Method:** S2540G-11

QC Batch Method: S2540G-11

Associated Lab Samples: 3133238001

SAMPLE DUPLICATE: 3213871 ORIGINAL: 3133192003

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	98.1015	%	98.0454	.06	10
Total Solids	1.8984	%	1.9545	2.91	5

SAMPLE DUPLICATE: 3213872 ORIGINAL: 3133441001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	32.8108	%	36.1578	9.71	10
Total Solids	67.1891	%	63.8421	5.11*	5

SAMPLE DUPLICATE: 3213873 ORIGINAL: 3133501001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	30.2158	%	28.7014	5.14	10
Total Solids	69.7841	%	71.2985	2.15	5

SAMPLE DUPLICATE: 3213874 ORIGINAL: 3133549002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	9.7966	%	10.2916	4.93	10
Total Solids	90.2033	%	89.7083	.55	5

SAMPLE DUPLICATE: 3213875 ORIGINAL: 3133549012

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	6.6382	%	5.5113	18.6*	10
Total Solids	93.3617	%	94.4886	1.2	5

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QUALITY CONTROL DATA

Workorder: 3133238 AEH081|20100478

SAMPLE DUPLICATE: 3213876 ORIGINAL: 3133574007

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	22.0183	%	22.3537	1.51	10
Total Solids	77.9816	%	77.6462	.43	5

SAMPLE DUPLICATE: 3213877 ORIGINAL: 3133574017

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	26.2443	%	22.55	15.1*	10
Total Solids	73.7556	%	77.4499	4.89	5

SAMPLE DUPLICATE: 3213878 ORIGINAL: 3133574027

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	9.8259	%	7.1193	31.9*	10
Total Solids	90.174	%	92.8806	2.96	5

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3133238 AEH081|20100478

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3133238001	Wildwood 02	SW846 8151A	EXTR/62175	SW846 8151A	SVGC/58501
3133238001	Wildwood 02			S2540G-11	WETC/245305

Subcontractor:
ALS Environmental
301 Fulling Mill Road
Middletown, PA 17057
TEL: (717) 944-5541
FAX: (717) 944-1430
Acct #:

ALS Environmental

CHAIN-OF-CUSTODY RECO

* 3 1 3 3 2 3 8 *

Salesperson: Josh Mckinney

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	20100478	A	Subcontracted Analyses (SUBCONTRACT)
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Bill Carey	Inv Attn	Accounts Payable	D	
Address	3352 128th Ave	Address	3352 128th Ave	E	
				F	
City/State/Zip	Holland, Michigan 49424	City/State/Zip	Holland, Michigan 49424	G	
Phone	(616) 399-6070	Phone	(616) 399-6070	H	
Fax	(616) 399-6185	Fax	(616) 399-6185	I	
eMail Address	bill.carey@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
20100478-01B	Wildwood 02	Soil	5/Oct/2020 8:15	(1) 4OZGNEAT	X									

Comments:

Please analyze these samples for Herbicides (SW8151). Please include all QC with data. The samples do not need to be returned and can be disposed after 30 days.

10/7/20 1500 Fedex

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
Fedex	10/8/20 0902	SEC	10/8/20 0902	1° 40	LEVEL IV
Relinquished by:	Date/Time	Received by:	Date/Time		

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
ALS Holland	31332398	SEC	10/8/20

1. Were airbills / tracking numbers present and recorded?	NONE	(YES)[1]	NO
Tracking number: 1668 7924 5140			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	(NO)
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		YES	(NO)
5d. Does the COC note the type(s) of preservation for all bottles?		YES	(NO)
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		YES	(NO)
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?[1]	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	(N/A)	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #:								
Temperature (°C):	10							
Thermometer ID:	401							
Radiological (µCi):								

COMMENTS (Required for all NO responses above and any sample non-conformance):

[1]Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Rev 1/20/2020

ClientSampID	SampID	SampleDate	Analyte	FinalResult	Runits	Rlimit	DF	Table B-1 Lowest Default Target Levels All Soil Types	EPA May/2020 THQ=0.1 Screening Level Residential Soil	Background USGS Jasper County (NGDB sample D146059) A-horizon	Background USGS Jasper County (NGDB sample D146048) A-horizon
Wildwood 02	20100478-01C	10/05/2020	Aluminum	8,100	mg/Kg-dry	320	100	76000	7700	31700	37600
Wildwood 02	20100478-01C	10/05/2020	Arsenic	7.5	mg/Kg-dry	0.40	1	3.9	0.68	10	8
Wildwood 02	20100478-01C	10/05/2020	Barium	2,400	mg/Kg-dry	40	100	2000	1500	300	500
Wildwood 02	20100478-01C	10/05/2020	Beryllium	0.89	mg/Kg-dry	0.16	1	0.74	16	1	1
Wildwood 02	20100478-01C	10/05/2020	Calcium	1,900	mg/Kg-dry	40	1	NS	NS	4200	2800
Wildwood 02	20100478-01C	10/05/2020	Chromium	14	mg/Kg-dry	0.40	1	NS	NS	70	70
Wildwood 02	20100478-01C	10/05/2020	Cobalt	19	mg/Kg-dry	0.40	1	NS	2.3	7	7
Wildwood 02	20100478-01C	10/05/2020	Copper	4.5	mg/Kg-dry	0.40	1	620	310	15	15
Wildwood 02	20100478-01C	10/05/2020	Iron	200,000	mg/Kg-dry	1,600	100	NS	5500	23100	23800
Wildwood 02	20100478-01C	10/05/2020	Lead	35	mg/Kg-dry	0.40	1	3.7	400	50	30
Wildwood 02	20100478-01C	10/05/2020	Magnesium	560	mg/Kg-dry	16	1	NS	NS	1600	1600
Wildwood 02	20100478-01C	10/05/2020	Manganese	1,300	mg/Kg-dry	40	100	2700	180	700	300
Wildwood 02	20100478-01C	10/05/2020	Nickel	5.1	mg/Kg-dry	0.40	1	500	150	15	15
Wildwood 02	20100478-01C	10/05/2020	Potassium	400	mg/Kg-dry	16	1	NS	NS	7400	9900
Wildwood 02	20100478-01C	10/05/2020	Selenium	0.79	mg/Kg-dry	0.40	1	6.27	39	0.2	0.1
Wildwood 02	20100478-01C	10/05/2020	Sodium	34	mg/Kg-dry	24	1	NS	NS	2500	2500
Wildwood 02	20100478-01C	10/05/2020	Vanadium	42	mg/Kg-dry	0.40	1	530	39	70	70
Wildwood 02	20100478-01C	10/05/2020	Zinc	25	mg/Kg-dry	0.80	1	7200	2300	181	144

Note: Yellow shaded analytes are above the MRBCA LDTL. Orange shaded above the MRBCA DTL (or tehre is no applicable MO std) and are above background values for the area.

15-Sep-2020

Angye Dragotta
Environmental Quality Management, Inc.
1800 Carillon Blvd
Cincinnati, OH 45240

Re: **Oronogo** Work Order: **20090352**

Dear Angye,

ALS Environmental received 1 sample on 03-Sep-2020 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 52.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 15-Sep-20

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: **20090352**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20090352-01	Wildwood 01	Soil		9/2/2020 11:15	9/3/2020 10:00	☐

Client: Environmental Quality Management, Inc.
Project: Oronogo
WorkOrder: **20090352**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
as noted	
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20090352

Case Narrative

Samples for the above noted Work Order were received on 9/3/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
No other deviations or anomalies were noted.

Extractable Organics:
Batch 163788, Method PESTLVI_8081_S, Sample 20090352-01C: One or more surrogate recoveries were below the lower control limits. The sample results may be biased low,
Tetrachloro-m-xylene
Decachlorobiphenyl
-Matrix interference (similar results in MS/MSD also).

Batch 163788, Method PESTLVI_8081_S, Sample 20090352-01C MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Decachlorobiphenyl
Endrin aldehyde
Methoxychlor

Batch 163788, Method PESTLVI_8081_S, Sample 20090352-01C MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte.

Metals:
Batch 163735, Method ICP_6020_S, Sample 20090352-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ba, Mn

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMS: The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Cr, V

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Sb

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Fe

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al, Zn

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: Cr, V

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Sb

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was outside of the control limit. However, the MS recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: Co, Mg, K

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Fe, Pb

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al, Zn

Batch 163735, Method ICP_6020_S, Sample 20090352-01CMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Mn

Wet Chemistry:

No other deviations or anomalies were noted.

ALS Group, USA

Date: *15-Sep-20*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20090352
Sample ID: Wildwood 01
Lab ID: 20090352-01
Collection Date: 9/2/2020 11:15 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: SW3546 9/8/20 13:25		Analyst: **RM**
Aroclor 1016	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1221	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1232	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1242	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1248	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1254	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Aroclor 1260	ND		0.077	mg/Kg-dry	1	9/8/2020 06:43 PM
Surr: Decachlorobiphenyl	*53.8*		*40-140*	*%REC*	1	9/8/2020 06:43 PM
Surr: Tetrachloro-m-xylene	*58.1*		*45-124*	*%REC*	1	9/8/2020 06:43 PM
PESTICIDES			**SW8081A**	Prep: SW3546 9/8/20 10:48		Analyst: **RM**
4,4´-DDD	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
4,4´-DDE	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
4,4´-DDT	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Aldrin	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
alpha-BHC	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
alpha-Chlordane	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
beta-BHC	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Chlordane, Technical	ND		0.029	mg/Kg-dry	1	9/8/2020 09:16 PM
delta-BHC	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Dieldrin	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endosulfan I	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endosulfan II	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endosulfan sulfate	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endrin	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endrin aldehyde	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Endrin ketone	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
gamma-BHC (Lindane)	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
gamma-Chlordane	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Heptachlor	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Heptachlor epoxide	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Methoxychlor	ND		0.012	mg/Kg-dry	1	9/8/2020 09:16 PM
Toxaphene	ND		0.070	mg/Kg-dry	1	9/8/2020 09:16 PM
Surr: Decachlorobiphenyl	*41.9*	S	*50-150*	*%REC*	1	9/8/2020 09:16 PM
Surr: Tetrachloro-m-xylene	*48.0*	S	*50-150*	*%REC*	1	9/8/2020 09:16 PM
MERCURY BY CVAA			**SW7471B**	Prep: SW7471 9/4/20 09:35		Analyst: **MAC**
Mercury	**0.18**		**0.019**	**mg/Kg-dry**	1	9/4/2020 02:45 PM
METALS BY ICP-MS			**SW6020B**	Prep: SW3050B 9/4/20 08:02		Analyst: **STP**

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20090352
Sample ID: Wildwood 01 **Lab ID:** 20090352-01
Collection Date: 9/2/2020 11:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aluminum	**8,300**		**380**	**mg/Kg-dry**	100	9/8/2020 02:51 PM
Antimony	ND		0.47	mg/Kg-dry	1	9/4/2020 07:19 PM
Arsenic	**5.8**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Barium	**200**		**4.7**	**mg/Kg-dry**	10	9/8/2020 02:56 PM
Beryllium	**0.81**		**0.19**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Cadmium	**3.5**		**0.19**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Calcium	**1,900**		**47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Chromium	**16**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Cobalt	**11**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Copper	**10**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Iron	**13,000**		**19**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Lead	**62**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Magnesium	**530**		**19**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Manganese	**1,200**		**4.7**	**mg/Kg-dry**	10	9/8/2020 02:56 PM
Nickel	**5.7**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Potassium	**530**		**19**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Selenium	**0.56**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Silver	ND		0.47	mg/Kg-dry	1	9/4/2020 07:19 PM
Sodium	ND		28	mg/Kg-dry	1	9/4/2020 07:19 PM
Thallium	ND		0.47	mg/Kg-dry	1	9/4/2020 07:19 PM
Vanadium	**31**		**0.47**	**mg/Kg-dry**	1	9/4/2020 07:19 PM
Zinc	**440**		**94**	**mg/Kg-dry**	100	9/8/2020 02:51 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**	Prep: SW3546 9/4/20 16:35		Analyst: **EE**
1,1`-Biphenyl	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4,5-Trichlorophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4,6-Trichlorophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4-Dichlorophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4-Dimethylphenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4-Dinitrophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,4-Dinitrotoluene	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2,6-Dinitrotoluene	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2-Chloronaphthalene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
2-Chlorophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2-Methylnaphthalene	**0.020**		**0.0080**	**mg/Kg-dry**	1	9/8/2020 01:11 PM
2-Methylphenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2-Nitroaniline	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
2-Nitrophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
3&4-Methylphenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
3,3´-Dichlorobenzidine	ND		0.20	mg/Kg-dry	1	9/8/2020 01:11 PM
3-Nitroaniline	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20090352
Sample ID: Wildwood 01 **Lab ID:** 20090352-01
Collection Date: 9/2/2020 11:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
4,6-Dinitro-2-methylphenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Bromophenyl phenyl ether	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Chloro-3-methylphenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Chloroaniline	ND		0.080	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Chlorophenyl phenyl ether	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Nitroaniline	ND		0.20	mg/Kg-dry	1	9/8/2020 01:11 PM
4-Nitrophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Acenaphthene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Acenaphthylene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Acetophenone	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Anthracene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Atrazine	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzaldehyde	ND		0.080	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzo(a)anthracene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzo(a)pyrene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzo(b)fluoranthene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzo(g,h,i)perylene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Benzo(k)fluoranthene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Bis(2-chloroethoxy)methane	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Bis(2-chloroethyl)ether	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Bis(2-chloroisopropyl)ether	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Bis(2-ethylhexyl)phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Butyl benzyl phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Caprolactam	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Carbazole	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Chrysene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Dibenzo(a,h)anthracene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Dibenzofuran	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Diethyl phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Dimethyl phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Di-n-butyl phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Di-n-octyl phthalate	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Fluoranthene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Fluorene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Hexachlorobenzene	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Hexachlorobutadiene	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Hexachlorocyclopentadiene	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Hexachloroethane	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Indeno(1,2,3-cd)pyrene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Isophorone	ND		0.20	mg/Kg-dry	1	9/8/2020 01:11 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20090352
Sample ID: Wildwood 01 **Lab ID:** 20090352-01
Collection Date: 9/2/2020 11:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	**0.011**		**0.0080**	**mg/Kg-dry**	1	9/8/2020 01:11 PM
Nitrobenzene	ND		0.20	mg/Kg-dry	1	9/8/2020 01:11 PM
N-Nitrosodi-n-propylamine	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
N-Nitrosodiphenylamine	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Pentachlorophenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Phenanthrene	**0.024**		**0.0080**	**mg/Kg-dry**	1	9/8/2020 01:11 PM
Phenol	ND		0.040	mg/Kg-dry	1	9/8/2020 01:11 PM
Pyrene	ND		0.0080	mg/Kg-dry	1	9/8/2020 01:11 PM
Surr: 2,4,6-Tribromophenol	*68.7*		*38-92*	*%REC*	1	9/8/2020 01:11 PM
Surr: 2-Fluorobiphenyl	*68.9*		*44-107*	*%REC*	1	9/8/2020 01:11 PM
Surr: 2-Fluorophenol	*56.3*		*37-109*	*%REC*	1	9/8/2020 01:11 PM
Surr: 4-Terphenyl-d14	*90.9*		*52-123*	*%REC*	1	9/8/2020 01:11 PM
Surr: Nitrobenzene-d5	*65.3*		*41-94*	*%REC*	1	9/8/2020 01:11 PM
Surr: Phenol-d6	*64.8*		*28-111*	*%REC*	1	9/8/2020 01:11 PM
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL			**SW8260C**			Analyst: **MF**
1,1,1-Trichloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,1,2,2-Tetrachloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,1,2-Trichloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,1,2-Trichlorotrifluoroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,1-Dichloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,1-Dichloroethene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2,4-Trichlorobenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2-D bromo-3-chloropropane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2-D bromoethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2-Dichlorobenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2-Dichloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,2-Dichloropropane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,3-Dichlorobenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
1,4-Dichlorobenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
2-Butanone	**0.024**		**0.018**	**mg/Kg-dry**	1.534	9/4/2020 02:25 PM
2-Methylnaphthalene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
4-Methyl-2-pentanone	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Acetone	**0.15**		**0.018**	**mg/Kg-dry**	1.534	9/4/2020 02:25 PM
Benzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Bromodichloromethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Bromoform	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Bromomethane	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Carbon disulfide	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Carbon tetrachloride	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Chlorobenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20090352
Sample ID: Wildwood 01 **Lab ID:** 20090352-01
Collection Date: 9/2/2020 11:15 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Chloroethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Chloroform	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Chloromethane	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
cis-1,2-Dichloroethene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
cis-1,3-Dichloropropene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Cyclohexane	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Dibromochloromethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Dichlorodifluoromethane	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Ethylbenzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Isopropy benzene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Methyl acetate	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Methyl tert-butyl ether	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Methylcyclohexane	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Methylene chloride	ND		0.018	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Styrene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Tetrachloroethene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Toluene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
trans-1,2-Dichloroethene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
trans-1,3-Dichloropropene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Trichloroethene	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Trichlorofluoromethane	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Vinyl chloride	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Xylenes, Total	ND		0.0092	mg/Kg-dry	1.534	9/4/2020 02:25 PM
Surr: 1,2-Dichloroethane-d4	*115*		*83-132*	*%REC*	1.534	9/4/2020 02:25 PM
Surr: 4-Bromofluorobenzene	*99.1*		*83-111*	*%REC*	1.534	9/4/2020 02:25 PM
Surr: Dibromofluoromethane	*108*		*77-125*	*%REC*	1.534	9/4/2020 02:25 PM
Surr: Toluene-d8	*102*		*86-108*	*%REC*	1.534	9/4/2020 02:25 PM
MOISTURE			**SW3550C**			Analyst: **KTP**
Moisture	**17**		**0.10**	**% of sample**	1	9/4/2020 01:33 PM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **ALS**
Subcontracted Analyses	**See report**			**as noted**	1	9/15/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

Batch ID: **163787** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-163787-163787** Units: **µg/Kg** Analysis Date: **9/8/2020 05:42 PM**

Client ID: Run ID: **GC14_200908A** SeqNo: **6692787** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	67								
Aroclor 1221	ND	67								
Aroclor 1232	ND	67								
Aroclor 1242	ND	67								
Aroclor 1248	ND	67								
Aroclor 1254	ND	67								
Aroclor 1260	ND	67								
Surr: Decachlorobiphenyl	*35.58*	0	*33.3*	0	*107*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*37.78*	0	*33.3*	0	*113*	*45-124*	0			

LCS Sample ID: **PLCSS1-163787-163787** Units: **µg/Kg** Analysis Date: **9/8/2020 05:57 PM**

Client ID: Run ID: **GC14_200908A** SeqNo: **6692788** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	743.8	67	833	0	89.3	50-130	0			
Aroclor 1260	702.1	67	833	0	84.3	50-130	0			
Surr: Decachlorobiphenyl	*32.57*	0	*33.3*	0	*97.8*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*32.52*	0	*33.3*	0	*97.6*	*45-124*	0			

MS Sample ID: **20090352-01C MS** Units: **µg/Kg** Analysis Date: **9/8/2020 06:12 PM**

Client ID: **Wildwood 01** Run ID: **GC14_200908A** SeqNo: **6692789** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	749.4	66	819.2	0	91.5	40-140	0			
Aroclor 1260	771.8	66	819.2	0	94.2	40-140	0			
Surr: Decachlorobiphenyl	*33.7*	0	*32.75*	0	*103*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*33.96*	0	*32.75*	0	*104*	*45-124*	0			

MSD Sample ID: **20090352-01C MSD** Units: **µg/Kg** Analysis Date: **9/8/2020 06:28 PM**

Client ID: **Wildwood 01** Run ID: **GC14_200908A** SeqNo: **6692790** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	711.9	64	802.3	0	88.7	40-140	749.4	5.13	50	
Aroclor 1260	742.5	64	802.3	0	92.5	40-140	771.8	3.86	50	
Surr: Decachlorobiphenyl	*32.28*	0	*32.07*	0	*101*	*40-140*	33.7	*4.3*	*50*	
Surr: Tetrachloro-m-xylene	*32.09*	0	*32.07*	0	*100*	*45-124*	33.96	*5.67*	*50*	

The following samples were analyzed in this batch: 20090352-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MBLK	Sample ID: **PBLKS1-163788-163788**			Units: **µg/Kg**		Analysis Date: **9/8/2020 11:56 PM**			
Client ID:	Run ID: **GC12_200908A**			SeqNo: **6692476**		Prep Date: **9/8/2020**		DF: **1**	

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	ND	10								
4,4´-DDE	ND	10								
4,4´-DDT	ND	10								
Aldrin	ND	10								
alpha-BHC	ND	10								
alpha-Chlordane	ND	10								
beta-BHC	ND	10								
Chlordane, Technical	ND	25								
delta-BHC	ND	10								
Dieldrin	ND	10								
Endosulfan I	ND	10								
Endosulfan II	ND	10								
Endosulfan sulfate	ND	10								
Endrin	ND	10								
Endrin aldehyde	ND	10								
Endrin ketone	ND	10								
gamma-BHC (Lindane)	ND	10								
gamma-Chlordane	ND	10								
Heptachlor	ND	10								
Heptachlor epoxide	ND	10								
Methoxychlor	ND	10								
Toxaphene	ND	60								
Surr: Decachlorobiphenyl	*29.32*	0	*33.3*	0	*88*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.57*	0	*33.3*	0	*91.8*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

LCS Sample ID: **PLCSS1-163788-163788** Units: **µg/Kg** Analysis Date: **9/9/2020 12:11 AM**
Client ID: Run ID: **GC12_200908A** SeqNo: **6692477** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	28.93	10	33.33	0	86.8	50-150	0			
4,4´-DDE	29.3	10	33.33	0	87.9	50-150	0			
4,4´-DDT	27.62	10	33.33	0	82.9	50-150	0			
Aldrin	29.97	10	33.33	0	89.9	50-150	0			
alpha-BHC	30.18	10	33.33	0	90.6	50-150	0			
alpha-Chlordane	29.87	10	33.33	0	89.6	50-150	0			
beta-BHC	29.53	10	33.33	0	88.6	50-150	0			
delta-BHC	30.18	10	33.33	0	90.6	50-150	0			
Dieldrin	29.75	10	33.33	0	89.3	50-150	0			
Endosulfan I	29.65	10	33.33	0	89	50-150	0			
Endosulfan II	27.35	10	33.33	0	82.1	50-150	0			
Endosulfan sulfate	28.62	10	33.33	0	85.9	50-150	0			
Endrin	27.15	10	33.33	0	81.5	50-150	0			
Endrin aldehyde	25.32	10	33.33	0	76	50-150	0			
Endrin ketone	30.38	10	33.33	0	91.2	50-150	0			
gamma-BHC (Lindane)	30.05	10	33.33	0	90.2	50-150	0			
gamma-Chlordane	28.75	10	33.33	0	86.3	50-150	0			
Heptachlor	30.02	10	33.33	0	90.1	50-150	0			
Heptachlor epoxide	30.43	10	33.33	0	91.3	50-150	0			
Methoxychlor	24.9	10	33.33	0	74.7	50-150	0			
Surr: Decachlorobiphenyl	*28.53*	0	*33.3*	0	*85.7*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*29.65*	0	*33.3*	0	*89*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MS Sample ID: **20090352-01C MS** Units: **µg/Kg** Analysis Date: **9/8/2020 08:46 PM**
Client ID: **Wildwood 01** Run ID: **GC12_200908A** SeqNo: **6692467** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	18.04	9.7	32.42	0	55.7	50-150	0			
4,4´-DDE	17.57	9.7	32.42	0	54.2	50-150	0			
4,4´-DDT	16.34	9.7	32.42	0	50.4	50-150	0			
Aldrin	17.56	9.7	32.42	0	54.2	50-150	0			
alpha-BHC	17.51	9.7	32.42	0	54	50-150	0			
alpha-Chlordane	17.75	9.7	32.42	0	54.8	50-150	0			
beta-BHC	17.33	9.7	32.42	0	53.5	50-150	0			
delta-BHC	17.26	9.7	32.42	0	53.3	50-150	0			
Dieldrin	17.6	9.7	32.42	0	54.3	50-150	0			
Endosulfan I	17.8	9.7	32.42	0	54.9	50-150	0			
Endosulfan II	17.34	9.7	32.42	0	53.5	50-150	0			
Endosulfan sulfate	16.71	9.7	32.42	0	51.6	50-150	0			
Endrin	17.04	9.7	32.42	0	52.6	50-150	0			
Endrin aldehyde	10.11	9.7	32.42	0	31.2	50-150	0			S
Endrin ketone	16.86	9.7	32.42	0	52	50-150	0			
gamma-BHC (Lindane)	17.8	9.7	32.42	0	54.9	50-150	0			
gamma-Chlordane	16.74	9.7	32.42	0	51.7	50-150	0			
Heptachlor	17.62	9.7	32.42	0	54.4	50-150	0			
Heptachlor epoxide	17.72	9.7	32.42	0	54.7	50-150	0			
Methoxychlor	13.24	9.7	32.42	0	40.9	50-150	0			S
Surr: Decachlorobiphenyl	*15.95*	0	*32.39*	0	*49.2*	*50-150*	0			*S*
Surr: Tetrachloro-m-xylene	*17.15*	0	*32.39*	0	*53*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MSD Sample ID: **20090352-01C MSD** Units: **µg/Kg** Analysis Date: **9/8/2020 09:01 PM**
Client ID: **Wildwood 01** Run ID: **GC12_200908A** SeqNo: **6692468** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	19.36	9.7	32.4	0	59.8	50-150	18.04	7.07	35	
4,4´-DDE	18.52	9.7	32.4	0	57.2	50-150	17.57	5.26	35	
4,4´-DDT	17.89	9.7	32.4	0	55.2	50-150	16.34	9.05	35	
Aldrin	18.33	9.7	32.4	0	56.6	50-150	17.56	4.3	35	
alpha-BHC	18.13	9.7	32.4	0	56	50-150	17.51	3.51	35	
alpha-Chlordane	18.63	9.7	32.4	0	57.5	50-150	17.75	4.86	35	
beta-BHC	17.95	9.7	32.4	0	55.4	50-150	17.33	3.54	35	
delta-BHC	18.31	9.7	32.4	0	56.5	50-150	17.26	5.88	35	
Dieldrin	18.76	9.7	32.4	0	57.9	50-150	17.6	6.38	35	
Endosulfan I	18.81	9.7	32.4	0	58.1	50-150	17.8	5.54	35	
Endosulfan II	18.52	9.7	32.4	0	57.2	50-150	17.34	6.56	35	
Endosulfan sulfate	17.97	9.7	32.4	0	55.5	50-150	16.71	7.25	35	
Endrin	18.23	9.7	32.4	0	56.3	50-150	17.04	6.76	35	
Endrin aldehyde	10.27	9.7	32.4	0	31.7	50-150	10.11	1.55	35	S
Endrin ketone	18.24	9.7	32.4	0	56.3	50-150	16.86	7.9	35	
gamma-BHC (Lindane)	18.75	9.7	32.4	0	57.9	50-150	17.8	5.19	35	
gamma-Chlordane	17.5	9.7	32.4	0	54	50-150	16.74	4.41	35	
Heptachlor	18.63	9.7	32.4	0	57.5	50-150	17.62	5.59	35	
Heptachlor epoxide	18.81	9.7	32.4	0	58.1	50-150	17.72	5.99	35	
Methoxychlor	14.7	9.7	32.4	0	45.4	50-150	13.24	10.4	35	S
Surr: Decachlorobiphenyl	*17.37*	0	*32.37*	0	*53.7*	*50-150*	15.95	*8.52*	*35*	
Surr: Tetrachloro-m-xylene	*17.97*	0	*32.37*	0	*55.5*	*50-150*	17.15	*4.67*	*35*	

The following samples were analyzed in this batch: 20090352-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163743** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-163743-163743** Units: **mg/Kg** Analysis Date: **9/4/2020 01:52 PM**
Client ID: Run ID: **HG4_200904A** SeqNo: **6687369** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-163743-163743** Units: **mg/Kg** Analysis Date: **9/4/2020 01:59 PM**
Client ID: Run ID: **HG4_200904A** SeqNo: **6687373** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1758	0.020	0.1665	0	106	80-120	0			

MS Sample ID: **20082277-01DMS** Units: **mg/Kg** Analysis Date: **9/4/2020 02:03 PM**
Client ID: Run ID: **HG4_200904A** SeqNo: **6687375** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2354	0.018	0.1537	0.09438	91.7	75-125	0			

MSD Sample ID: **20082277-01DMSD** Units: **mg/Kg** Analysis Date: **9/4/2020 02:04 PM**
Client ID: Run ID: **HG4_200904A** SeqNo: **6687376** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2367	0.019	0.1561	0.09438	91.2	75-125	0.2354	0.565	35	

The following samples were analyzed in this batch: 20090352-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163735** Instrument ID **ICPMS4** Method: **SW6020B**

MBLK	Sample ID: **MBLK-163735-163735**				Units: **mg/Kg**			Analysis Date: **9/4/2020 07:13 PM**		
Client ID:		Run ID: **ICPMS4_200904B**			SeqNo: **6687305**		Prep Date: **9/4/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	2.0								
Antimony	ND	0.25								
Arsenic	ND	0.25								
Barium	ND	0.25								
Beryllium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	25								
Chromium	ND	0.25								
Cobalt	ND	0.25								
Copper	ND	0.25								
Iron	ND	10								
Lead	ND	0.25								
Magnesium	ND	10								
Manganese	ND	0.25								
Nickel	ND	0.25								
Potassium	ND	10								
Selenium	ND	0.25								
Silver	ND	0.25								
Sodium	ND	15								
Thallium	ND	0.25								
Vanadium	ND	0.25								
Zinc	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163735** Instrument ID **ICPMS4** Method: **SW6020B**

LCS	Sample ID: **LCS-163735-163735**				Units: **mg/Kg**			Analysis Date: **9/4/2020 07:14 PM**			
Client ID:		Run ID: **ICPMS4_200904B**			SeqNo: **6687306**		Prep Date: **9/4/2020**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	4.886	2.0	5	0	97.7	80-120	0			
Antimony	4.863	0.25	5	0	97.3	80-120	0			
Arsenic	4.642	0.25	5	0	92.8	80-120	0			
Barium	4.995	0.25	5	0	99.9	80-120	0			
Beryllium	4.964	0.10	5	0	99.3	80-120	0			
Cadmium	4.963	0.10	5	0	99.3	80-120	0			
Calcium	507.8	25	500	0	102	80-120	0			
Chromium	4.986	0.25	5	0	99.7	80-120	0			
Cobalt	4.881	0.25	5	0	97.6	80-120	0			
Copper	4.932	0.25	5	0	98.6	80-120	0			
Iron	490.7	10	500	0	98.1	80-120	0			
Lead	5.002	0.25	5	0	100	80-120	0			
Magnesium	496.7	10	500	0	99.3	80-120	0			
Manganese	4.81	0.25	5	0	96.2	80-120	0			
Nickel	4.812	0.25	5	0	96.2	80-120	0			
Potassium	495.4	10	500	0	99.1	80-120	0			
Selenium	4.832	0.25	5	0	96.6	80-120	0			
Silver	5.155	0.25	5	0	103	80-120	0			
Sodium	506.5	15	500	0	101	80-120	0			
Thallium	4.832	0.25	5	0	96.6	80-120	0			
Vanadium	5.196	0.25	5	0	104	80-120	0			
Zinc	4.816	0.50	5	0	96.3	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163735** Instrument ID **ICPMS4** Method: **SW6020B**

MS Sample ID: **20090352-01CMS** Units: **mg/Kg** Analysis Date: **9/4/2020 07:21 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200904B** SeqNo: **6687310** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	4.957	0.38	7.692	0.2171	61.6	75-125	0			S
Arsenic	11.76	0.38	7.692	4.815	90.3	75-125	0			
Beryllium	8.274	0.15	7.692	0.6754	98.8	75-125	0			
Cadmium	9.162	0.15	7.692	2.888	81.6	75-125	0			
Calcium	2200	38	769.2	1549	84.7	75-125	0			
Chromium	29.89	0.38	7.692	13.66	211	75-125	0			S
Cobalt	16.46	0.38	7.692	9.166	94.8	75-125	0			
Copper	14.72	0.38	7.692	8.273	83.8	75-125	0			
Iron	14340	15	769.2	10530	495	75-125	0			SEO
Lead	60.39	0.38	7.692	51.17	120	75-125	0			O
Magnesium	1369	15	769.2	442.4	120	75-125	0			
Nickel	12.59	0.38	7.692	4.72	102	75-125	0			
Potassium	1385	15	769.2	438.9	123	75-125	0			
Selenium	6.676	0.38	7.692	0.4668	80.7	75-125	0			
Silver	6.515	0.38	7.692	0.03222	84.3	75-125	0			
Sodium	732.2	23	769.2	16.38	93.1	75-125	0			
Thallium	7.23	0.38	7.692	0.1203	92.4	75-125	0			
Vanadium	42.24	0.38	7.692	25.37	219	75-125	0			S

MS Sample ID: **20090352-01CMS** Units: **mg/Kg** Analysis Date: **9/8/2020 02:53 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200908B** SeqNo: **6689112** Prep Date: **9/4/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	12230	310	7.692	6795	70700	75-125	0			SO
Zinc	373.3	77	7.692	356.8	213	75-125	0			SO

MS Sample ID: **20090352-01CMS** Units: **mg/Kg** Analysis Date: **9/8/2020 02:57 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200908B** SeqNo: **6689115** Prep Date: **9/4/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	192.4	3.8	7.692	162.3	391	75-125	0			SO
Manganese	1146	3.8	7.692	980.2	2160	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163735** Instrument ID **ICPMS4** Method: **SW6020B**

MSD Sample ID: **20090352-01CMSD** Units: **mg/Kg** Analysis Date: **9/4/2020 07:23 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200904B** SeqNo: **6687311** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.051	0.39	7.716	0.2171	62.6	75-125	4.957	1.87	20	S
Arsenic	11.39	0.39	7.716	4.815	85.2	75-125	11.76	3.23	20	
Beryllium	8.381	0.15	7.716	0.6754	99.9	75-125	8.274	1.29	20	
Cadmium	9.327	0.15	7.716	2.888	83.5	75-125	9.162	1.79	20	
Calcium	2305	39	771.6	1549	98	75-125	2200	4.65	20	
Chromium	24.89	0.39	7.716	13.66	145	75-125	29.89	18.3	20	S
Cobalt	14.76	0.39	7.716	9.166	72.6	75-125	16.46	10.9	20	S
Copper	15.71	0.39	7.716	8.273	96.4	75-125	14.72	6.5	20	
Iron	12890	15	771.6	10530	305	75-125	14340	10.7	20	SO
Lead	62.68	0.39	7.716	51.17	149	75-125	60.39	3.73	20	SO
Magnesium	1413	15	771.6	442.4	126	75-125	1369	3.14	20	S
Nickel	12.33	0.39	7.716	4.72	98.7	75-125	12.59	2.09	20	
Potassium	1411	15	771.6	438.9	126	75-125	1385	1.85	20	S
Selenium	6.833	0.39	7.716	0.4668	82.5	75-125	6.676	2.32	20	
Silver	6.651	0.39	7.716	0.03222	85.8	75-125	6.515	2.06	20	
Sodium	743.5	23	771.6	16.38	94.2	75-125	732.2	1.54	20	
Thallium	7.408	0.39	7.716	0.1203	94.4	75-125	7.23	2.43	20	
Vanadium	37.28	0.39	7.716	25.37	154	75-125	42.24	12.5	20	S

MSD Sample ID: **20090352-01CMSD** Units: **mg/Kg** Analysis Date: **9/8/2020 02:54 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200908B** SeqNo: **6689113** Prep Date: **9/4/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	12080	310	7.716	6795	68400	75-125	11850	1.86	20	SO
Zinc	389.7	77	7.716	356.8	426	75-125	365	6.55	20	SO

MSD Sample ID: **20090352-01CMSD** Units: **mg/Kg** Analysis Date: **9/8/2020 02:59 PM**
Client ID: **Wildwood 01** Run ID: **ICPMS4_200908B** SeqNo: **6689116** Prep Date: **9/4/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	169.2	3.9	7.716	162.3	89.5	75-125	192.4	12.8	20	O
Manganese	867.6	3.9	7.716	980.2	-1460	75-125	1146	27.7	20	SRO

The following samples were analyzed in this batch: 20090352-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-163752-163752** Units: **µg/Kg** Analysis Date: **9/8/2020 12:29 PM**
Client ID: Run ID: **SVMS8_200908A** SeqNo: **6689134** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	ND	33								
2,4,5-Trichlorophenol	ND	33								
2,4,6-Trichlorophenol	ND	33								
2,4-Dichlorophenol	ND	33								
2,4-Dimethylphenol	ND	33								
2,4-Dinitrophenol	ND	33								
2,4-Dinitrotoluene	ND	33								
2,6-Dinitrotoluene	ND	33								
2-Chloronaphthalene	ND	6.7								
2-Chlorophenol	ND	33								
2-Methylnaphthalene	ND	6.7								
2-Methylphenol	ND	33								
2-Nitroaniline	ND	33								
2-Nitrophenol	ND	33								
3&4-Methylphenol	ND	33								
3,3´-Dichlorobenzidine	ND	170								
3-Nitroaniline	ND	33								
4,6-Dinitro-2-methylphenol	ND	33								
4-Bromophenyl phenyl ether	ND	33								
4-Chloro-3-methylphenol	ND	33								
4-Chloroaniline	ND	67								
4-Chlorophenyl phenyl ether	ND	33								
4-Nitroaniline	ND	170								
4-Nitrophenol	ND	33								
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Acetophenone	ND	33								
Anthracene	ND	6.7								
Atrazine	ND	33								
Benzaldehyde	ND	67								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Bis(2-chloroethoxy)methane	ND	33								
Bis(2-chloroethyl)ether	ND	33								
Bis(2-chloroisopropyl)ether	ND	33								
Bis(2-ethylhexyl)phthalate	ND	33								
Butyl benzyl phthalate	ND	33								
Caprolactam	ND	33								
Carbazole	ND	33								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	ND	6.7					
Dibenzo(a,h)anthracene	ND	6.7					
Dibenzofuran	ND	33					
Diethyl phthalate	ND	33					
Dimethyl phthalate	ND	33					
Di-n-butyl phthalate	ND	33					
Di-n-octyl phthalate	ND	33					
Fluoranthene	ND	6.7					
Fluorene	ND	6.7					
Hexachlorobenzene	ND	33					
Hexachlorobutadiene	ND	33					
Hexachlorocyclopentadiene	ND	33					
Hexachloroethane	ND	33					
Indeno(1,2,3-cd)pyrene	ND	6.7					
Isophorone	ND	170					
Naphthalene	ND	6.7					
Nitrobenzene	ND	170					
N-Nitrosodi-n-propylamine	ND	33					
N-Nitrosodiphenylamine	ND	33					
Pentachlorophenol	ND	33					
Phenanthrene	ND	6.7					
Phenol	ND	33					
Pyrene	ND	6.7					
Surr: 2,4,6-Tribromophenol	*2025*	0	*3333*	0	*60.8*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2205*	0	*3333*	0	*66.1*	*44-107*	0
Surr: 2-Fluorophenol	*2199*	0	*3333*	0	*66*	*37-109*	0
Surr: 4-Terphenyl-d14	*2884*	0	*3333*	0	*86.5*	*52-123*	0
Surr: Nitrobenzene-d5	*2221*	0	*3333*	0	*66.6*	*41-94*	0
Surr: Phenol-d6	*2416*	0	*3333*	0	*72.5*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS	Sample ID: **SLCSS1-163752-163752**				Units: **µg/Kg**			Analysis Date: **9/8/2020 12:50 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689135**			Prep Date: **9/4/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	968.7	33	1333	0	72.7	53-97	0			
2,4,5-Trichlorophenol	906.7	33	1333	0	68	52-111	0			
2,4,6-Trichlorophenol	898.7	33	1333	0	67.4	46-105	0			
2,4-Dichlorophenol	874.7	33	1333	0	65.6	47-96	0			
2,4-Dimethylphenol	965.3	33	1333	0	72.4	49-97	0			
2,4-Dinitrophenol	496	33	1333	0	37.2	10-106	0			
2,4-Dinitrotoluene	990	33	1333	0	74.3	58-110	0			
2,6-Dinitrotoluene	979.3	33	1333	0	73.5	59-108	0			
2-Chloronaphthalene	926	6.7	1333	0	69.5	56-104	0			
2-Chlorophenol	883.3	33	1333	0	66.3	50-104	0			
2-Methylnaphthalene	936.7	6.7	1333	0	70.3	54-96	0			
2-Methylphenol	910	33	1333	0	68.3	49-105	0			
2-Nitroaniline	940.7	33	1333	0	70.6	54-107	0			
2-Nitrophenol	931.3	33	1333	0	69.9	51-94	0			
3&4-Methylphenol	916.7	33	1333	0	68.8	48-105	0			
3,3´-Dichlorobenzidine	884.7	170	1333	0	66.4	39-99	0			
3-Nitroaniline	526.7	33	1333	0	39.5	17-92	0			
4,6-Dinitro-2-methylphenol	787.3	33	1333	0	59.1	32-103	0			
4-Bromophenyl phenyl ether	994.7	33	1333	0	74.6	60-106	0			
4-Chloro-3-methylphenol	916	33	1333	0	68.7	51-101	0			
4-Chloroaniline	866.7	67	1333	0	65	27-110	0			
4-Chlorophenyl phenyl ether	972	33	1333	0	72.9	58-106	0			
4-Nitroaniline	718	170	1333	0	53.9	21-100	0			
4-Nitrophenol	1015	33	1333	0	76.1	29-120	0			
Acenaphthene	953.3	6.7	1333	0	71.5	55-101	0			
Acenaphthylene	998.7	6.7	1333	0	74.9	59-106	0			
Acetophenone	961.3	33	1333	0	72.1	51-100	0			
Anthracene	992.7	6.7	1333	0	74.5	67-105	0			
Atrazine	1048	33	1333	0	78.6	45-125	0			
Benzaldehyde	304	67	1333	0	22.8	10-120	0			
Benzo(a)anthracene	1021	6.7	1333	0	76.6	68-105	0			
Benzo(a)pyrene	994	6.7	1333	0	74.6	68-110	0			
Benzo(b)fluoranthene	1017	6.7	1333	0	76.3	65-110	0			
Benzo(g,h,i)perylene	1116	6.7	1333	0	83.7	60-120	0			
Benzo(k)fluoranthene	1016	6.7	1333	0	76.2	66-113	0			
Bis(2-chloroethoxy)methane	930	33	1333	0	69.8	53-96	0			
Bis(2-chloroethyl)ether	939.3	33	1333	0	70.5	47-108	0			
Bis(2-chloroisopropyl)ether	924	33	1333	0	69.3	47-107	0			
Bis(2-ethylhexyl)phthalate	1068	33	1333	0	80.1	59-117	0			
Butyl benzyl phthalate	952	33	1333	0	71.4	59-106	0			
Caprolactam	916.7	33	1333	0	68.8	42-105	0			
Carbazole	981.3	33	1333	0	73.6	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	1017	6.7	1333	0	76.3	68-108	0
Dibenzo(a,h)anthracene	1094	6.7	1333	0	82.1	62-119	0
Dibenzofuran	948.7	33	1333	0	71.2	60-104	0
Diethyl phthalate	992	33	1333	0	74.4	62-111	0
Dimethyl phthalate	967.3	33	1333	0	72.6	62-106	0
Di-n-butyl phthalate	1050	33	1333	0	78.8	59-105	0
Di-n-octyl phthalate	1035	33	1333	0	77.7	51-123	0
Fluoranthene	998	6.7	1333	0	74.9	67-106	0
Fluorene	949.3	6.7	1333	0	71.2	59-107	0
Hexachlorobenzene	999.3	33	1333	0	75	62-103	0
Hexachlorobutadiene	964.7	33	1333	0	72.4	51-94	0
Hexachlorocyclopentadiene	962	33	1333	0	72.2	25-120	0
Hexachloroethane	908.7	33	1333	0	68.2	55-93	0
Indeno(1,2,3-cd)pyrene	1108	6.7	1333	0	83.1	56-120	0
Isophorone	950.7	170	1333	0	71.3	52-99	0
Naphthalene	909.3	6.7	1333	0	68.2	46-98	0
Nitrobenzene	930.7	170	1333	0	69.8	53-95	0
N-Nitrosodi-n-propylamine	932.7	33	1333	0	70	50-104	0
N-Nitrosodiphenylamine	980	33	1333	0	73.5	63-107	0
Pentachlorophenol	802	33	1333	0	60.2	34-106	0
Phenanthrene	978.7	6.7	1333	0	73.4	66-101	0
Phenol	990.7	33	1333	0	74.3	44-109	0
Pyrene	994	6.7	1333	0	74.6	60-119	0
Surr: 2,4,6-Tribromophenol	*2513*	0	*3333*	0	*75.4*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2431*	0	*3333*	0	*72.9*	*44-107*	0
Surr: 2-Fluorophenol	*2333*	0	*3333*	0	*70*	*37-109*	0
Surr: 4-Terphenyl-d14	*2795*	0	*3333*	0	*83.8*	*52-123*	0
Surr: Nitrobenzene-d5	*2468*	0	*3333*	0	*74*	*41-94*	0
Surr: Phenol-d6	*2495*	0	*3333*	0	*74.8*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MS	Sample ID: **20090017-01B MS**				Units: **µg/Kg**			Analysis Date: **9/8/2020 01:54 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689138**			Prep Date: **9/4/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	944.6	330	1321	0	71.5	53-97	0			
2,4,5-Trichlorophenol	812.5	330	1321	0	61.5	52-111	0			
2,4,6-Trichlorophenol	852.1	330	1321	0	64.5	46-105	0			
2,4-Dichlorophenol	852.1	330	1321	0	64.5	47-96	0			
2,4-Dimethylphenol	898.3	330	1321	0	68	49-97	0			
2,4-Dinitrophenol	ND	330	1321	0	0	10-106	0			S
2,4-Dinitrotoluene	891.7	330	1321	0	67.5	58-110	0			
2,6-Dinitrotoluene	957.8	330	1321	0	72.5	59-108	0			
2-Chloronaphthalene	819.1	66	1321	0	62	56-104	0			
2-Chlorophenol	865.3	330	1321	0	65.5	50-104	0			
2-Methylnaphthalene	904.9	66	1321	0	68.5	54-96	0			
2-Methylphenol	924.8	330	1321	0	70	49-105	0			
2-Nitroaniline	898.3	330	1321	0	68	54-107	0			
2-Nitrophenol	838.9	330	1321	0	63.5	51-94	0			
3&4-Methylphenol	951.2	330	1321	0	72	48-105	0			
3,3´-Dichlorobenzidine	687	1,700	1321	0	52	39-99	0			J
3-Nitroaniline	904.9	330	1321	0	68.5	17-92	0			
4,6-Dinitro-2-methylphenol	515.2	330	1321	0	39	32-103	0			
4-Bromophenyl phenyl ether	885.1	330	1321	0	67	60-106	0			
4-Chloro-3-methylphenol	924.8	330	1321	0	70	51-101	0			
4-Chloroaniline	627.5	660	1321	0	47.5	27-110	0			J
4-Chlorophenyl phenyl ether	911.6	330	1321	0	69	58-106	0			
4-Nitroaniline	924.8	1,700	1321	0	70	21-100	0			J
4-Nitrophenol	1050	330	1321	0	79.5	29-120	0			
Acenaphthene	911.6	66	1321	0	69	55-101	0			
Acenaphthylene	904.9	66	1321	0	68.5	59-106	0			
Acetophenone	984.2	330	1321	0	74.5	51-100	0			
Anthracene	918.2	66	1321	0	69.5	67-105	0			
Atrazine	1030	330	1321	0	78	45-125	0			
Benzaldehyde	ND	660	1321	0	0	10-120	0			S
Benzo(a)anthracene	1044	66	1321	105	71.1	68-105	0			
Benzo(a)pyrene	1017	66	1321	0	77	68-110	0			
Benzo(b)fluoranthene	1070	66	1321	0	81	65-110	0			
Benzo(g,h,i)perylene	871.9	66	1321	0	66	60-120	0			
Benzo(k)fluoranthene	971	66	1321	0	73.5	66-113	0			
Bis(2-chloroethoxy)methane	871.9	330	1321	0	66	53-96	0			
Bis(2-chloroethyl)ether	964.4	330	1321	0	73	47-108	0			
Bis(2-chloroisopropyl)ether	990.8	330	1321	0	75	47-107	0			
Bis(2-ethylhexyl)phthalate	871.9	330	1321	0	66	59-117	0			
Butyl benzyl phthalate	891.7	330	1321	0	67.5	59-106	0			
Caprolactam	944.6	330	1321	0	71.5	42-105	0			
Carbazole	938	330	1321	0	71	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	990.8	66	1321	85.3	68.6	68-108	0	
Dibenzo(a,h)anthracene	792.7	66	1321	0	60	62-119	0	S
Dibenzofuran	931.4	330	1321	0	70.5	60-104	0	
Diethyl phthalate	891.7	330	1321	0	67.5	62-111	0	
Dimethyl phthalate	891.7	330	1321	0	67.5	62-106	0	
Di-n-butyl phthalate	911.6	330	1321	0	69	59-105	0	
Di-n-octyl phthalate	1130	330	1321	0	85.5	51-123	0	
Fluoranthene	1070	66	1321	131.2	71.1	67-106	0	
Fluorene	871.9	66	1321	0	66	59-107	0	
Hexachlorobenzene	852.1	330	1321	0	64.5	62-103	0	
Hexachlorobutadiene	832.3	330	1321	0	63	51-94	0	
Hexachlorocyclopentadiene	488.8	330	1321	0	37	25-120	0	
Hexachloroethane	838.9	330	1321	0	63.5	55-93	0	
Indeno(1,2,3-cd)pyrene	898.3	66	1321	0	68	56-120	0	
Isophorone	898.3	1,700	1321	0	68	52-99	0	J
Naphthalene	865.3	66	1321	0	65.5	46-98	0	
Nitrobenzene	885.1	1,700	1321	0	67	53-95	0	J
N-Nitrosodi-n-propylamine	944.6	330	1321	0	71.5	50-104	0	
N-Nitrosodiphenylamine	885.1	330	1321	0	67	63-107	0	
Pentachlorophenol	554.9	330	1321	0	42	34-106	0	
Phenanthrene	1011	66	1321	0	76.5	66-101	0	
Phenol	924.8	330	1321	0	70	44-109	0	
Pyrene	1004	66	1321	118.1	67.1	60-119	0	
Surr: 2,4,6-Tribromophenol	*2054*	0	*3302*	0	*62.2*	*38-92*	0	
Surr: 2-Fluorobiphenyl	*2120*	0	*3302*	0	*64.2*	*44-107*	0	
Surr: 2-Fluorophenol	*2081*	0	*3302*	0	*63*	*37-109*	0	
Surr: 4-Terphenyl-d14	*2325*	0	*3302*	0	*70.4*	*52-123*	0	
Surr: Nitrobenzene-d5	*2226*	0	*3302*	0	*67.4*	*41-94*	0	
Surr: Phenol-d6	*2246*	0	*3302*	0	*68*	*28-111*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MSD	Sample ID: **20090017-01B MSD**				Units: **µg/Kg**		Analysis Date: **9/8/2020 02:16 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689139**		Prep Date: **9/4/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	947.8	330	1325	0	71.5	53-97	944.6	0.344	30	
2,4,5-Trichlorophenol	828.5	330	1325	0	62.5	52-111	812.5	1.96	30	
2,4,6-Trichlorophenol	848.4	330	1325	0	64	46-105	852.1	0.434	30	
2,4-Dichlorophenol	841.8	330	1325	0	63.5	47-96	852.1	1.22	30	
2,4-Dimethylphenol	881.6	330	1325	0	66.5	49-97	898.3	1.89	30	
2,4-Dinitrophenol	503.7	330	1325	0	38	10-106	0	200	30	R
2,4-Dinitrotoluene	848.4	330	1325	0	64	58-110	891.7	4.98	30	
2,6-Dinitrotoluene	947.8	330	1325	0	71.5	59-108	957.8	1.05	30	
2-Chloronaphthalene	874.9	66	1325	0	66	56-104	819.1	6.59	30	
2-Chlorophenol	874.9	330	1325	0	66	50-104	865.3	1.1	30	
2-Methylnaphthalene	928	66	1325	0	70	54-96	904.9	2.51	30	
2-Methylphenol	901.4	330	1325	0	68	49-105	924.8	2.55	30	
2-Nitroaniline	855	330	1325	0	64.5	54-107	898.3	4.94	30	
2-Nitrophenol	855	330	1325	0	64.5	51-94	838.9	1.91	30	
3&4-Methylphenol	881.6	330	1325	0	66.5	48-105	951.2	7.6	30	
3,3´-Dichlorobenzidine	696	1,700	1325	0	52.5	39-99	687	0	30	J
3-Nitroaniline	855	330	1325	0	64.5	17-92	904.9	5.67	30	
4,6-Dinitro-2-methylphenol	550.1	330	1325	0	41.5	32-103	515.2	6.55	30	
4-Bromophenyl phenyl ether	994.2	330	1325	0	75	60-106	885.1	11.6	30	
4-Chloro-3-methylphenol	855	330	1325	0	64.5	51-101	924.8	7.84	30	
4-Chloroaniline	656.2	670	1325	0	49.5	27-110	627.5	0	30	J
4-Chlorophenyl phenyl ether	908.1	330	1325	0	68.5	58-106	911.6	0.383	30	
4-Nitroaniline	808.6	1,700	1325	0	61	21-100	924.8	0	30	J
4-Nitrophenol	888.2	330	1325	0	67	29-120	1050	16.7	30	
Acenaphthene	1001	66	1325	0	75.5	55-101	911.6	9.34	30	
Acenaphthylene	934.6	66	1325	0	70.5	59-106	904.9	3.22	30	
Acetophenone	908.1	330	1325	0	68.5	51-100	984.2	8.05	30	
Anthracene	928	66	1325	0	70	67-105	918.2	1.06	30	
Atrazine	947.8	330	1325	0	71.5	45-125	1030	8.35	30	
Benzaldehyde	536.9	670	1325	0	40.5	10-120	409.5	0	30	J
Benzo(a)anthracene	1034	66	1325	105	70.1	68-105	1044	0.93	30	
Benzo(a)pyrene	994.2	66	1325	0	75	68-110	1017	2.29	30	
Benzo(b)fluoranthene	1061	66	1325	0	80	65-110	1070	0.897	30	
Benzo(g,h,i)perylene	1034	66	1325	0	78	60-120	871.9	17	30	
Benzo(k)fluoranthene	928	66	1325	0	70	66-113	971	4.53	30	
Bis(2-chloroethoxy)methane	881.6	330	1325	0	66.5	53-96	871.9	1.1	30	
Bis(2-chloroethyl)ether	947.8	330	1325	0	71.5	47-108	964.4	1.73	30	
Bis(2-chloroisopropyl)ether	987.6	330	1325	0	74.5	47-107	990.8	0.325	30	
Bis(2-ethylhexyl)phthalate	921.3	330	1325	0	69.5	59-117	871.9	5.51	30	
Butyl benzyl phthalate	961.1	330	1325	0	72.5	59-106	891.7	7.49	30	
Caprolactam	702.6	330	1325	0	53	42-105	944.6	29.4	30	
Carbazole	894.8	330	1325	0	67.5	67-108	938	4.71	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Chrysene	1001	66	1325	85.3	69.1	68-108	990.8	1.01	30	
Dibenzo(a,h)anthracene	954.5	66	1325	0	72	62-119	792.7	18.5	30	
Dibenzofuran	928	330	1325	0	70	60-104	931.4	0.368	30	
Diethyl phthalate	908.1	330	1325	0	68.5	62-111	891.7	1.81	30	
Dimethyl phthalate	881.6	330	1325	0	66.5	62-106	891.7	1.15	30	
Di-n-butyl phthalate	934.6	330	1325	0	70.5	59-105	911.6	2.49	30	
Di-n-octyl phthalate	1100	330	1325	0	83	51-123	1130	2.62	30	
Fluoranthene	967.7	66	1325	131.2	63.1	67-106	1070	10	30	S
Fluorene	881.6	66	1325	0	66.5	59-107	871.9	1.1	30	
Hexachlorobenzene	934.6	330	1325	0	70.5	62-103	852.1	9.23	30	
Hexachlorobutadiene	908.1	330	1325	0	68.5	51-94	832.3	8.71	30	
Hexachlorocyclopentadiene	629.7	330	1325	0	47.5	25-120	488.8	25.2	30	
Hexachloroethane	908.1	330	1325	0	68.5	55-93	838.9	7.92	30	
Indeno(1,2,3-cd)pyrene	947.8	66	1325	0	71.5	56-120	898.3	5.36	30	
Isophorone	928	1,700	1325	0	70	52-99	898.3	0	30	J
Naphthalene	888.2	66	1325	0	67	46-98	865.3	2.61	30	
Nitrobenzene	921.3	1,700	1325	0	69.5	53-95	885.1	0	30	J
N-Nitrosodi-n-propylamine	874.9	330	1325	0	66	50-104	944.6	7.66	30	
N-Nitrosodiphenylamine	947.8	330	1325	0	71.5	63-107	885.1	6.84	30	
Pentachlorophenol	642.9	330	1325	0	48.5	34-106	554.9	14.7	30	
Phenanthrene	1007	66	1325	0	76	66-101	1011	0.312	30	
Phenol	908.1	330	1325	0	68.5	44-109	924.8	1.82	30	
Pyrene	1114	66	1325	118.1	75.1	60-119	1004	10.3	30	
Surr: 2,4,6-Tribromophenol	*2148*	0	*3314*	0	*64.8*	*38-92*	2054	*4.44*	*40*	
Surr: 2-Fluorobiphenyl	*2234*	0	*3314*	0	*67.4*	*44-107*	2120	*5.21*	*40*	
Surr: 2-Fluorophenol	*2041*	0	*3314*	0	*61.6*	*37-109*	2081	*1.9*	*40*	
Surr: 4-Terphenyl-d14	*2744*	0	*3314*	0	*82.8*	*52-123*	2325	*16.5*	*40*	
Surr: Nitrobenzene-d5	*2273*	0	*3314*	0	*68.6*	*41-94*	2226	*2.11*	*40*	
Surr: Phenol-d6	*2201*	0	*3314*	0	*66.4*	*28-111*	2246	*2.04*	*40*	

The following samples were analyzed in this batch: 20090352-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: **VBLKS1-200904-R297438** Units: **µg/Kg** Analysis Date: **9/4/2020 12:06 PM**
Client ID: Run ID: **VMS8_200904A** SeqNo: **6684988** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1,2-Trichlorotrifluoroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2-D bromo-3-chloropropane	ND	5.0								
1,2-D bromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	10								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	10								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	10								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Cyclohexane	ND	10								
Dibromochloromethane	ND	5.0								
Dichlorodifluoromethane	ND	10								
Ethylbenzene	ND	5.0								
Isopropy benzene	ND	5.0								
Methyl acetate	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylcyclohexane	ND	10								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	5.0					
Surr: 1,2-Dichloroethane-d4	*20.96*	0	*20*	0	*105*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.96*	0	*20*	0	*105*	*83-111*	0
Surr: Dibromofluoromethane	*20.54*	0	*20*	0	*103*	*77-125*	0
Surr: Toluene-d8	*20.21*	0	*20*	0	*101*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

LCS	Sample ID: **VLCSS1-200904-R297438**				Units: **µg/Kg**			Analysis Date: **9/4/2020 11:21 AM**			
Client ID:		Run ID: **VMS8_200904A**			SeqNo: **6684987**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.21	5.0	20	0	101	73-138	0			
1,1,2,2-Tetrachloroethane	17.57	5.0	20	0	87.8	71-126	0			
1,1,2-Trichloroethane	17.79	5.0	20	0	89	77-123	0			
1,1-Dichloroethane	19.55	5.0	20	0	97.8	63-148	0			
1,1-Dichloroethene	21.66	5.0	20	0	108	67-156	0			
1,2,4-Trichlorobenzene	18.6	5.0	20	0	93	70-132	0			
1,2-D bromo-3-chloropropane	16.23	5.0	20	0	81.2	48-127	0			
1,2-D bromoethane	17.96	5.0	20	0	89.8	71-144	0			
1,2-Dichlorobenzene	18	5.0	20	0	90	77-127	0			
1,2-Dichloroethane	19.28	5.0	20	0	96.4	77-127	0			
1,2-Dichloropropane	18.66	5.0	20	0	93.3	74-130	0			
1,3-Dichlorobenzene	18.37	5.0	20	0	91.8	75-133	0			
1,4-Dichlorobenzene	18.37	5.0	20	0	91.8	74-130	0			
2-Butanone	19.07	10	20	0	95.4	55-132	0			
4-Methyl-2-pentanone	26.36	5.0	20	0	132	67-159	0			
Acetone	21.25	10	20	0	106	31-156	0			
Benzene	19.69	5.0	20	0	98.4	77-133	0			
Bromodichloromethane	19	5.0	20	0	95	69-133	0			
Bromoform	17.92	5.0	20	0	89.6	55-126	0			
Bromomethane	24.29	10	20	0	121	31-174	0			
Carbon disulfide	21.42	5.0	20	0	107	45-160	0			
Carbon tetrachloride	19.29	5.0	20	0	96.4	69-140	0			
Chlorobenzene	19.07	5.0	20	0	95.4	76-130	0			
Chloroethane	22.93	5.0	20	0	115	53-150	0			
Chloroform	18.99	5.0	20	0	95	72-132	0			
Chloromethane	17.78	10	20	0	88.9	43-150	0			
cis-1,2-Dichloroethene	21.18	5.0	20	0	106	74-134	0			
cis-1,3-Dichloropropene	19.32	5.0	20	0	96.6	62-134	0			
Dibromochloromethane	16.71	5.0	20	0	83.6	57-118	0			
Dichlorodifluoromethane	21.42	10	20	0	107	43-126	0			
Ethylbenzene	20.45	5.0	20	0	102	75-133	0			
Isopropy benzene	20.55	5.0	20	0	103	74-137	0			
Methyl tert-butyl ether	18.19	5.0	20	0	91	62-136	0			
Methylene chloride	18.95	10	20	0	94.8	55-157	0			
Styrene	23.02	5.0	20	0	115	72-138	0			
Tetrachloroethene	19.54	5.0	20	0	97.7	70-171	0			
Toluene	19.18	5.0	20	0	95.9	76-130	0			
trans-1,2-Dichloroethene	20.77	5.0	20	0	104	65-137	0			
trans-1,3-Dichloropropene	18.46	5.0	20	0	92.3	58-126	0			
Trichloroethene	19.63	5.0	20	0	98.2	75-135	0			
Trichlorofluoromethane	15.89	5.0	20	0	79.4	62-136	0			
Vinyl chloride	20.72	5.0	20	0	104	57-143	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	61.52	5.0	60	0	103	75-132	0
Surr: 1,2-Dichloroethane-d4	*20.93*	0	*20*	0	*105*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.43*	0	*20*	0	*102*	*83-111*	0
Surr: Dibromofluoromethane	*20.87*	0	*20*	0	*104*	*77-125*	0
Surr: Toluene-d8	*20*	0	*20*	0	*100*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

MS Sample ID: **20082365-04A MS** Units: **µg/Kg** Analysis Date: **9/4/2020 07:42 PM**
Client ID: Run ID: **VMS8_200904A** SeqNo: **6686689** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.81	5.0	20	0	94	73-138	0			
1,1,2,2-Tetrachloroethane	17.61	5.0	20	0	88	71-126	0			
1,1,2-Trichloroethane	18.95	5.0	20	0	94.8	77-123	0			
1,1-Dichloroethane	19.35	5.0	20	0	96.8	63-148	0			
1,1-Dichloroethene	20.85	5.0	20	0	104	67-156	0			
1,2,4-Trichlorobenzene	13.41	5.0	20	0	67	70-132	0			S
1,2-D bromo-3-chloropropane	14.37	5.0	20	0	71.8	48-127	0			
1,2-D bromoethane	18.09	5.0	20	0	90.4	71-144	0			
1,2-Dichlorobenzene	15.77	5.0	20	0	78.8	77-127	0			
1,2-Dichloroethane	20.13	5.0	20	0	101	77-127	0			
1,2-Dichloropropane	17.63	5.0	20	0	88.2	74-130	0			
1,3-Dichlorobenzene	15.72	5.0	20	0	78.6	75-133	0			
1,4-Dichlorobenzene	15.72	5.0	20	0	78.6	74-130	0			
2-Butanone	38.11	10	20	0	191	55-132	0			S
4-Methyl-2-pentanone	25.72	5.0	20	0	129	67-159	0			
Acetone	77.24	10	20	12.03	326	31-156	0			S
Benzene	18.16	5.0	20	0	90.8	77-133	0			
Bromodichloromethane	18.47	5.0	20	0	92.4	69-133	0			
Bromoform	16.91	5.0	20	0	84.6	55-126	0			
Bromomethane	17.02	10	20	0	85.1	31-174	0			
Carbon disulfide	19.14	5.0	20	0.6084	92.7	45-160	0			
Carbon tetrachloride	16.85	5.0	20	0	84.2	69-140	0			
Chlorobenzene	17.31	5.0	20	0	86.6	76-130	0			
Chloroethane	20.76	5.0	20	0	104	53-150	0			
Chloroform	19.16	5.0	20	0	95.8	72-132	0			
Chloromethane	16.62	10	20	0	83.1	43-150	0			
cis-1,2-Dichloroethene	20.44	5.0	20	0	102	74-134	0			
cis-1,3-Dichloropropene	18.12	5.0	20	0	90.6	62-134	0			
Dibromochloromethane	15.72	5.0	20	0	78.6	57-118	0			
Dichlorodifluoromethane	21.63	10	20	0	108	43-126	0			
Ethylbenzene	18.46	5.0	20	0	92.3	75-133	0			
Isopropy benzene	17.93	5.0	20	0	89.6	74-137	0			
Methyl tert-butyl ether	20.44	5.0	20	0	102	62-136	0			
Methylene chloride	20.98	10	20	0	105	55-157	0			
Styrene	19.28	5.0	20	0	96.4	72-138	0			
Tetrachloroethene	19.08	5.0	20	0	95.4	70-171	0			
Toluene	17.61	5.0	20	0	88	76-130	0			
trans-1,2-Dichloroethene	19.7	5.0	20	0	98.5	65-137	0			
trans-1,3-Dichloropropene	16.57	5.0	20	0	82.8	58-126	0			
Trichloroethene	17.55	5.0	20	0	87.8	75-135	0			
Trichlorofluoromethane	16.06	5.0	20	0	80.3	62-136	0			
Vinyl chloride	18.98	5.0	20	0	94.9	57-143	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	55.27	5.0	60	0	92.1	75-132	0
Surr: 1,2-Dichloroethane-d4	*21.59*	0	*20*	0	*108*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20*	0	*20*	0	*100*	*83-111*	0
Surr: Dibromofluoromethane	*21.64*	0	*20*	0	*108*	*77-125*	0
Surr: Toluene-d8	*19.82*	0	*20*	0	*99.1*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

MSD Sample ID: **20082365-04A MSD** Units: **µg/Kg** Analysis Date: **9/4/2020 07:58 PM**
Client ID: Run ID: **VMS8_200904A** SeqNo: **6686690** Prep Date: DF: **0.996**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	12.75	5.0	19.92	0	64	73-138	18.81	38.4	30	SR
1,1,2,2-Tetrachloroethane	16.08	5.0	19.92	0	80.7	71-126	17.61	9.11	30	
1,1,2-Trichloroethane	16.36	5.0	19.92	0	82.2	77-123	18.95	14.6	30	
1,1-Dichloroethane	13.62	5.0	19.92	0	68.3	63-148	19.35	34.8	30	R
1,1-Dichloroethene	13.96	5.0	19.92	0	70.1	67-156	20.85	39.6	30	R
1,2,4-Trichlorobenzene	11.23	5.0	19.92	0	56.4	70-132	13.41	17.7	30	S
1,2-D bromo-3-chloropropane	14.18	5.0	19.92	0	71.2	48-127	14.37	1.31	30	
1,2-D bromoethane	15.86	5.0	19.92	0	79.6	71-144	18.09	13.2	30	
1,2-Dichlorobenzene	13.32	5.0	19.92	0	66.8	77-127	15.77	16.9	30	S
1,2-Dichloroethane	16.46	5.0	19.92	0	82.7	77-127	20.13	20	30	
1,2-Dichloropropane	13.68	5.0	19.92	0	68.7	74-130	17.63	25.3	30	S
1,3-Dichlorobenzene	12.36	5.0	19.92	0	62.1	75-133	15.72	23.9	30	S
1,4-Dichlorobenzene	12.36	5.0	19.92	0	62.1	74-130	15.72	23.9	30	S
2-Butanone	34.44	10	19.92	0	173	55-132	38.11	10.1	30	S
4-Methyl-2-pentanone	23.31	5.0	19.92	0	117	67-159	25.72	9.85	30	
Acetone	64.39	10	19.92	12.03	263	31-156	77.24	18.1	30	S
Benzene	13.31	5.0	19.92	0	66.8	77-133	18.16	30.8	30	SR
Bromodichloromethane	14.2	5.0	19.92	0	71.3	69-133	18.47	26.1	30	
Bromoform	14.11	5.0	19.92	0	70.8	55-126	16.91	18	30	
Bromomethane	12.4	10	19.92	0	62.2	31-174	17.02	31.4	30	R
Carbon disulfide	13.09	5.0	19.92	0.6084	62.6	45-160	19.14	37.6	30	R
Carbon tetrachloride	11.14	5.0	19.92	0	55.9	69-140	16.85	40.8	30	SR
Chlorobenzene	13.25	5.0	19.92	0	66.5	76-130	17.31	26.6	30	S
Chloroethane	16.87	5.0	19.92	0	84.7	53-150	20.76	20.7	30	
Chloroform	14.29	5.0	19.92	0	71.8	72-132	19.16	29.1	30	S
Chloromethane	11.7	10	19.92	0	58.8	43-150	16.62	34.7	30	R
cis-1,2-Dichloroethene	14.8	5.0	19.92	0	74.3	74-134	20.44	32	30	R
cis-1,3-Dichloropropene	14.01	5.0	19.92	0	70.3	62-134	18.12	25.6	30	
Dibromochloromethane	13.19	5.0	19.92	0	66.2	57-118	15.72	17.5	30	
Dichlorodifluoromethane	14.42	10	19.92	0	72.4	43-126	21.63	40	30	R
Ethylbenzene	13.35	5.0	19.92	0	67	75-133	18.46	32.2	30	SR
Isopropy benzene	12.63	5.0	19.92	0	63.4	74-137	17.93	34.7	30	SR
Methyl tert-butyl ether	17.46	5.0	19.92	0	87.7	62-136	20.44	15.7	30	
Methylene chloride	15.56	10	19.92	0	78.1	55-157	20.98	29.7	30	
Styrene	14.87	5.0	19.92	0	74.7	72-138	19.28	25.8	30	
Tetrachloroethene	13.5	5.0	19.92	0	67.8	70-171	19.08	34.3	30	SR
Toluene	12.85	5.0	19.92	0	64.5	76-130	17.61	31.3	30	SR
trans-1,2-Dichloroethene	13.8	5.0	19.92	0	69.3	65-137	19.7	35.2	30	R
trans-1,3-Dichloropropene	14.65	5.0	19.92	0	73.6	58-126	16.57	12.3	30	
Trichloroethene	12.54	5.0	19.92	0	62.9	75-135	17.55	33.3	30	SR
Trichlorofluoromethane	10.57	5.0	19.92	0	53.1	62-136	16.06	41.3	30	SR
Vinyl chloride	13.36	5.0	19.92	0	67.1	57-143	18.98	34.8	30	R

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R297438** Instrument ID **VMS8** Method: **SW8260C**

Xylenes, Total	40.02	5.0	59.76	0	67	75-132	55.27	32	30	SR
Surr: 1,2-Dichloroethane-d4	*21.49*	0	*19.92*	0	*108*	*83-132*	21.59	*0.447*	*30*	
Surr: 4-Bromofluorobenzene	*19.81*	0	*19.92*	0	*99.4*	*83-111*	20	*0.953*	*30*	
Surr: Dibromofluoromethane	*21*	0	*19.92*	0	*105*	*77-125*	21.64	*3.02*	*30*	
Surr: Toluene-d8	*19.86*	0	*19.92*	0	*99.7*	*86-108*	19.82	*0.203*	*30*	

The following samples were analyzed in this batch: 20090352-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20090352
Project: Oronogo

QC BATCH REPORT

Batch ID: **R297546** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R297546** Units: **% of sample** Analysis Date: **9/4/2020 01:33 PM**
Client ID: Run ID: **MOIST_200904C** SeqNo: **6688085** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.10								

LCS Sample ID: **LCS-R297546** Units: **% of sample** Analysis Date: **9/4/2020 01:33 PM**
Client ID: Run ID: **MOIST_200904C** SeqNo: **6688084** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20082115-02A DUP** Units: **% of sample** Analysis Date: **9/4/2020 01:33 PM**
Client ID: Run ID: **MOIST_200904C** SeqNo: **6688063** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	19.16	0.10	0	0	0	0-0	19.73	2.93	10	

DUP Sample ID: **20082115-01A DUP** Units: **% of sample** Analysis Date: **9/4/2020 01:33 PM**
Client ID: Run ID: **MOIST_200904C** SeqNo: **6688083** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.49	0.10	0	0	0	0-0	10.63	1.33	10	

The following samples were analyzed in this batch: 20090352-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 222855

ALS Project Manager:

ALS Work Order #: 2009 0352

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Oronogo	A	Volatiles - EPA 5035/8260
Work Order		Project Number	030319.0001	B	Semivolatiles - EPA 8270
Company Name	Environmental Quality Management, Inc	Bill To Company	Environmental Quality Management, In	C	Pesticides - EPA 8081
Send Report To	adragotta@eqm.com	Invoice Attn	Accounts Payable	D	PCB - EPA 8082
Address	1800 Carillon Blvd	Address	1800 Carillon Blvd	E	Metals - EPA 6010
				F	Herbicides - EPA 8151
City/State/Zip	Cincinnati, OH 45240	City/State/Zip	Cincinnati, OH 45240	G	
Phone	(513) 825-7500	Phone	(513) 825-7500	H	
Fax	(513) 825-7435	Fax	(513) 825-7435	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Wildwood 01	9/2/2020	11:15	soil	5,7,8	6	X	X	X	X	X	X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Harlan Smith Harlan Smith

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☐ 5 WK Days ☒ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by: Harlan Smith	Date: 9/2/2020	Time: 12:00	Received by: FED EX	
Relinquished by: FED EX	Date: 9/3/20	Time: 1000	Received by (Laboratory):	
Logged by (Laboratory): DFS	Date: 9/3/20	Time: 1500	Checked by (Laboratory):	

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Notes:

Cooler ID	Cooler Temp.
IR4	4.6°C

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **EQM - CINCINNATI** Date/Time Received: **03-Sep-20 10:00**

Work Order: **20090352** Received by: **DS**

Checklist completed by Diane Shaw (eSignature) 03-Sep-20 (Date) Reviewed by: Bill Carey (eSignature) 04-Sep-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6 c	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/3/2020 3:06:35 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

September 14, 2020

Mr. Bill Carey
ALS Environmental-Holland
3352 128th Avenue
Holland, MI 49424

Certificate of Analysis

Project Name:	**2020-HERBICIDES FULL LIST SOIL - RUSH**	Workorder:	**3126782**
Purchase Order:	**20-122019869**	Workorder ID:	**AEH077|20090352**

Dear Mr. Carey:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, September 9, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Brandon Frye

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3126782 AEH077|20090352

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3126782001	Wildwood 01	Solid	9/2/2020 11:15	9/9/2020 10:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 3126782 AEH077|20090352

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All L brary Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Sp ke
MSD	Matrix Sp ke Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3126782 AEH077|20090352

Lab ID: **3126782001** Date Collected: 9/2/2020 11:15 Matrix: Solid

Sample ID: **Wildwood 01** Date Received: 9/9/2020 10:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
HERBICIDES										
2,4-D	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
2,4-DB	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Dalapon	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Dicamba	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Dichloroprop	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Dinoseb	ND		ug/kg	200	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Pentachlorophenol	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
2,4,5-T	ND		ug/kg	200	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
2,4,5-TP	ND		ug/kg	118	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	64.6		%	36 - 113	SW846 8151A	9/14/20 00:35	S7M	9/14/20 16:44	BS	A
WET CHEMISTRY										
Moisture	16.0		%	0.1	S2540G-11			9/10/20 13:45	AXD	A
Total Solids	84.0	1	%	0.1	S2540G-11			9/10/20 13:45	AXD	A

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3126782 AEH077|20090352

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3126782001	1	Wildwood 01	S2540G-11	Total Solids

Analyte was analyzed past the 7 day holding time.

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3126782 AEH077|20090352

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3126782001	Wildwood 01	S2540G-11		
3126782001	Wildwood 01	SW846 8151A	SW846 8151A	

QUALITY CONTROL DATA

Workorder: 3126782 AEH077|20090352

QC Batch: EXTR/61800 **Analysis Method:** SW846 8151A

QC Batch Method: SW846 8151A

Associated Lab Samples: 3126782001

METHOD BLANK: 3197246

Parameter	Blank Result	Units	Reporting Limit
2,4-D	ND	ug/kg	100
2,4-DB	ND	ug/kg	100
Dalapon	ND	ug/kg	100
Dicamba	ND	ug/kg	100
Dichloroprop	ND	ug/kg	100
Dinoseb	ND	ug/kg	170
Pentachlorophenol	ND	ug/kg	100
2,4,5-T	ND	ug/kg	170
2,4,5-TP	ND	ug/kg	100
2,4-Dichlorophenylacetic acid (S)	102	%	36 - 113

LABORATORY CONTROL SAMPLE: 3197247

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
2,4-D	64.9	ug/kg	333	216	23 - 130
2,4-DB	71.7	ug/kg	333	239	10 - 130
Dalapon	37.2	ug/kg	333	124	24 - 65
Dicamba	67	ug/kg	333	223	44 - 89
Dichloroprop	64.7	ug/kg	333	216	36 - 107
Dinoseb	59.1	ug/kg	333	197	25 - 100
Pentachlorophenol	62.8	ug/kg	333	209	43 - 90
2,4,5-T	61.4	ug/kg	333	205	22 - 132
2,4,5-TP	64.3	ug/kg	333	214	49 - 105
2,4-Dichlorophenylacetic acid (S)	69.7	%			36 - 113

QUALITY CONTROL DATA

Workorder: 3126782 AEH077|20090352

QC Batch: WETC/243837 **Analysis Method:** S2540G-11

QC Batch Method: S2540G-11

Associated Lab Samples: 3126782001

SAMPLE DUPLICATE: 3196077 ORIGINAL: 3126781001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	37.6967	%	33.1416	12.9*	10
Total Solids	62.3032	%	66.8583	7.05*	5

SAMPLE DUPLICATE: 3196080 ORIGINAL: 3126897002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	10.7166	%	10.4912	2.13	10
Total Solids	89.2833	%	89.5087	.25	5

SAMPLE DUPLICATE: 3196081 ORIGINAL: 3126897012

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	15.8847	%	16.7016	5.01	10
Total Solids	84.1152	%	83.2983	.98	5

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3126782 AEH077|20090352

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3126782001	Wildwood 01			S2540G-11	WETC/243837
3126782001	Wildwood 01	SW846 8151A	EXTR/61800	SW846 8151A	SVGC/58163

Subcontractor:
ALS Environmental
301 Fulling Mill Road
Middletown, PA 17057
TEL: (717) 944-5541
FAX: (717) 944-1430
Acct #:

CHAIN-OF-CUSTODY REC

3126782

ALS Environmental

Salesperson: Josh Mckinney

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	20090352	A	Subcontracted Analyses (SUBCONTRACT)
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Bill Carey	Inv Attn	Accounts Payable	D	
Address	3352 128th Ave	Address	3352 128th Ave	E	
				F	
City/State/Zip	Holland, Michigan 49424	City/State/Zip	Holland, Michigan 49424	G	
Phone	(616) 399-6070	Phone	(616) 399-6070	H	
Fax	(616) 399-6185	Fax	(616) 399-6185	I	
eMail Address	bill.carey@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
20090352-01B	Wildwood 01	Soil	2/Sep/2020 11:15	(1) 4OZGNEAT	X									

Comments:

Please analyze these samples for herbicides (SW8151). Thank you.

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
[signature] FedEx	9/9/20 1500	FedEx			LEVEL IV
Relinquished by:	Date/Time	Received by:	Date/Time		
		[signature] ALS	9-9-20 0945		

0° 294

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
ACS MI	31267782	CW	9-9-20

1. Were airbills / tracking numbers present and recorded?	NONE	~~YES~~	NO
Tracking number: 1Z0685923 0215			
2. Are Custody Seals on shipping containers intact?	~~NONE~~	YES	NO
3. Are Custody Seals on sample containers intact?	~~NONE~~	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	(NO)
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		YES	(NO)
5d. Does the COC note the type(s) of preservation for all bottles?		YES	(NO)
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		YES	(NO)
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?[1]	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		YES	(NO)
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	(N/A)	YES	NO
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #:	1							
Temperature (°C):	0							
Thermometer ID:	294							
Radiological (µCi):								

COMMENTS (Required for all NO responses above and any sample non-conformance):
Unp. No collector. Not rec'd w/ enough H.T. left for analysis (dry weight)

[1]Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Rev 1/20/2020

SAMPLE ID	LAB ID	METHOD	CAS NUMBER	ANALYTE	RESULT	UNITS	MDL	RL	Table B-1 Lowest Default Target Levels All Soil Types	EPA May/2020 THQ=0.1 Screening Level Residential Soil	Background USGS Newton County (NGS sample C-311257) A-horizon	Background USGS Lawrence County (NGS sample C-311261) A-horizon
Wildwood 01	20090352-01	SW8260C - VOC_8260_SLL	78-93-3	2-Butanone	0.024	mg/Kg-dry	0.0094	0.018	7.3	2700		
Wildwood 01	20090352-01	SW846 8270D - SVO_8270_S	91-57-6	2-Methylnaphthalene	0.020	mg/Kg-dry	0.0041	0.008	7.55			
Wildwood 01	20090352-01	SW8260C - VOC_8260_SLL	67-64-1	Acetone	0.15	mg/Kg-dry	0.0085	0.018	4.2			
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7429-90-5	Aluminum	8300	mg/Kg-dry	300	380	76000	7700		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-38-2	Arsenic	5.8	mg/Kg-dry	0.056	0.47	3.9	0.68	7.7	8.9
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-39-3	Barium	200	mg/Kg-dry	4.3	4.7	2000	1500		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-41-7	Beryllium	0.81	mg/Kg-dry	0.032	0.19	0.74	16	1.2	1.2
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-43-9	Cadmium	3.5	mg/Kg-dry	0.028	0.19	9.3	7.8		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-70-2	Calcium	1900	mg/Kg-dry	23	47	N/A	NS	1700	2600
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-47-3	Chromium	16	mg/Kg-dry	0.21	0.47	N/A	NS		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-48-4	Cobalt	11	mg/Kg-dry	0.077	0.47	N/A	2.3	9.3	20.9
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-50-8	Copper	10	mg/Kg-dry	0.47	0.47	620	310		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7439-89-6	Iron	13000	mg/Kg-dry	15	19	N/A	5500	18100	21900
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7439-92-1	Lead	62	mg/Kg-dry	0.23	0.47	3.7	400	27.3	33.6
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7439-95-4	Magnesium	530	mg/Kg-dry	13	19	N/A	NS	1200	1600
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7439-96-5	Manganese	1200	mg/Kg-dry	3.9	4.7	2700	180	697	1390
Wildwood 01	20090352-01	SW7471B - HG_7471_S	7439-97-6	Mercury	0.18	mg/Kg-dry	0.013	0.019	2.2	1.1		
Wildwood 01	20090352-01	SW846 8270D - SVO_8270_S	91-20-3	Naphthalene	0.011	mg/Kg-dry	0.0051	0.008	0.325			
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-02-0	Nickel	5.7	mg/Kg-dry	0.24	0.47	500	150		
Wildwood 01	20090352-01	SW846 8270D - SVO_8270_S	85-01-8	Phenanthrene	0.024	mg/Kg-dry	0.0037	0.008	158			
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	9/7/7440	Potassium	530	mg/Kg-dry	7.9	19	N/A	NS	8200	8700
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7782-49-2	Selenium	0.56	mg/Kg-dry	0.43	0.47	6.27			
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-62-2	Vanadium	31	mg/Kg-dry	0.12	0.47	530	39		
Wildwood 01	20090352-01	SW6020B - ICP_6020_S	7440-66-6	Zinc	440	mg/Kg-dry	92	94	7200	2300	31	39

Note: Shaded analytes are above the MRBCA LDTL. Lead and Beryllium were above MRBCA LDTL but below EPA RSL. Arsenic above both EPA RSL and MRBCA LDTL, but below background arsenic values for the area.

Schuber Mitchell

07-Nov-2019

Troy Cooper
EQM
315 S. Blackcat Rd
Joplin, MO 64801

Tel: (417) 392-0532
Fax:

Re: Oronogo - Duenweg Mine Site; PN.: 030319.0001 Work Order: **19101545**

Dear Troy,

ALS Environmental received 5 samples on 31-Oct-2019 11:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 8.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ALS Environmental

Date: 07-Nov-19

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001
Work Order: **19101545**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19101545-01	01	Air		10/23/2019	10/31/2019 11:50	☐
19101545-02	02	Air		10/23/2019	10/31/2019 11:50	☐
19101545-03	03	Air		10/23/2019	10/31/2019 11:50	☐
19101545-04	04	Air		10/23/2019	10/31/2019 11:50	☐
19101545-05	05 BLANK	Air		10/23/2019	10/31/2019 11:50	☐

ALS Environmental

Date: 07-Nov-19

Client:	EQM
Project:	Oronogo - Duenweg Mine Site; PN.: 030319.0001
Work Order:	19101545

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: *07-Nov-19*

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

Work Order: 19101545

Analytical Results

Lab ID: 19101545-01A
Collection Date: 10/23/2019
Client Sample ID: 01
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:15

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101545-02A
Collection Date: 10/23/2019
Client Sample ID: 02
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:19

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101545-03A
Collection Date: 10/23/2019
Client Sample ID: 03
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:23

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Note:

ALS Environmental

Date: *07-Nov-19*

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

Work Order: 19101545

Analytical Results

Lab ID: 19101545-04A
Collection Date: 10/23/2019
Client Sample ID: 04
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:27

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101545-05A
Collection Date: 10/23/2019
Client Sample ID: 05 BLANK
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **0** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:31

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	NA
Lead	ND	0.20	NA
Zinc	ND	10	NA

Note:

ALS Environmental

Date: 07-Nov-19

Client: EQM

Work Order: 19101545

Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

QC BATCH REPORT

Batch ID: **62978** Instrument ID **ICP1** Method: **N7300**

MBLK Sample ID: **MBLK-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 01:59 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131860** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	ND	0.10								
Lead	ND	0.20								
Zinc	ND	10								

LCS Sample ID: **LCS-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 02:07 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131862** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	20.86	0.10	20	0	104	80-120	0			
Lead	20.82	0.20	20	0	104	80-120	0			
Zinc	19.43	10	20	0	97.1	80-120	0			

LCSD Sample ID: **LCSD-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 02:11 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131863** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	20.38	0.10	20	0	102	80-120	20.86	2.33	20	
Lead	20.26	0.20	20	0	101	80-120	20.82	2.73	20	
Zinc	19.04	10	20	0	95.2	80-120	19.43	2.03	20	

The following samples were analyzed in this batch:

19101545-01A	19101545-02A	19101545-03A
19101545-04A	19101545-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001
WorkOrder: **19101545**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **EQM-JOPLIN** Date/Time Received: **31-Oct-19 11:50**

Work Order: **19101545** Received by: **SRM**

Checklist completed by Jan Wilcox (eSignature) 02-Nov-19 (Date) Reviewed by: Rob Nieman (eSignature) 05-Nov-19 (Date)

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS | Environmental
4388 Glendale Milford Rd.
Cincinnati, Ohio 45242
Phone: (800) 458-1493 or (513) 733-5336
Fax: (513) 733-5347

ANALYTICAL REQUEST FORM

34109

☑ REGULAR Status 19101546

☐ RUSH Status Required - ADDITIONAL CHARGE

RESULTS REQUIRED BY _____ DATE

CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 10-24-19 Purchase Order No. _____

Company Name Environmental Quality Management

Address 315 S BLACK CAT RD

JOPLIN MO 64801
City State Zip

Send Report To TROY COOPER

Email Address trcooper@eqm.com

Telephone (417) 392-0532

Alt. Contact Name Angye Dragotta

Alt. Contact Info adragotta@eqm.com

Quote No. _____

Sampling Site Orongo-Duenung Mine Site

Date/Time of Collection 10-24-19 Start 7:30 End 8:30

Project No. 030319.0001

Billing Address (if different)

EQM
1800 Carillon Blvd
Cincinnati, OH 45240

Lab Use Only	Client Sample Number	Media Type	Sample Volume (L)	Sample Time (min.)	ANALYSES REQUESTED - Use Method Number if Known
06	#6	AIR	2.0 LPM	960 min	Lead, Zinc, Cadmium
07	#7	AIR	2.0 LPM	960 min	Lead, Zinc, Cadmium
08	#8	AIR	2.0 LPM	960 min	Lead, Zinc, Cadmium
09	#9	AIR	2.0 LPM	960 min	Lead, Zinc, Cadmium
10	10 BLANK	AIR			Lead, Zinc, Cadmium

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished by: (Signature) T Cooper	Date / Time 10/28/19 8:25 am	Received by: (Signature) A Montgomery	Date / Time 10/31/19 11:50
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY

COOLER TEMP: _____ °C Taken with IR#:

COOLING METHOD: (NONE) COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT DROP BOX (FEDEX) UPS STD MAIL PRTY MAIL ALS COURIER OTHER:

CUSTODY SEALS: COOLER PACKAGE SAMPLES (NOT REQUIRED)

EQUIP. RETURNED:

07-Nov-2019

Troy Cooper
EQM
315 S. Blackcat Rd
Joplin, MO 64801

Tel: (417) 392-0532
Fax:

Re: Oronogo - Duenweg Mine Site; PN.: 030319.0001 Work Order: **19101546**

Dear Troy,

ALS Environmental received 5 samples on 31-Oct-2019 11:50 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 8.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ALS Environmental

Date: 07-Nov-19

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001
Work Order: **19101546**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19101546-01	06	Air		10/24/2019	11/2/2019	☐
19101546-02	07	Air		10/24/2019	11/2/2019	☐
19101546-03	08	Air		10/24/2019	11/2/2019	☐
19101546-04	09	Air		10/24/2019	11/2/2019	☐
19101546-05	10 BLANK	Air		10/24/2019	11/2/2019	☐

ALS Environmental

Date: 07-Nov-19

Client:	EQM
Project:	Oronogo - Duenweg Mine Site; PN.: 030319.0001
Work Order:	19101546

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: *07-Nov-19*

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

Work Order: 19101546

Analytical Results

Lab ID: 19101546-01A
Collection Date: 10/24/2019
Client Sample ID: 06
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:43

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101546-02A
Collection Date: 10/24/2019
Client Sample ID: 07
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:47

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101546-03A
Collection Date: 10/24/2019
Client Sample ID: 08
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:51

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Note:

ALS Environmental

Date: *07-Nov-19*

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

Work Order: 19101546

Analytical Results

Lab ID: 19101546-04A
Collection Date: 10/24/2019
Client Sample ID: 09
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **1920** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:55

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	<0.000052
Lead	ND	0.20	<0.00010
Zinc	ND	10	<0.0052

Lab ID: 19101546-05A
Collection Date: 10/24/2019
Client Sample ID: 10 BLANK
Matrix: AIR

Analyses

METALS BY NIOSH 7300 MOD. Method: **N7300** Air Volume (L): **0** Analyst: **SBD**

Date Analyzed: 11/4/2019 14:59

	µg/sample	Reporting Limit µg/sample	mg/m3
Cadmium	ND	0.10	NA
Lead	ND	0.20	NA
Zinc	ND	10	NA

Note:

ALS Environmental

Date: 07-Nov-19

Client: EQM

Work Order: 19101546

Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001

QC BATCH REPORT

Batch ID: **62978** Instrument ID **ICP1** Method: **N7300**

MBLK Sample ID: **MBLK-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 01:59 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131860** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	ND	0.10								
Lead	ND	0.20								
Zinc	ND	10								

LCS Sample ID: **LCS-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 02:07 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131862** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	20.86	0.10	20	0	104	80-120	0			
Lead	20.82	0.20	20	0	104	80-120	0			
Zinc	19.43	10	20	0	97.1	80-120	0			

LCSD Sample ID: **LCSD-62978-62978** Units: **µg/sample** Analysis Date: **11/4/2019 02:11 PM**

Client ID: Run ID: **ICP1_191104A** SeqNo: **2131863** Prep Date: **11/4/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	20.38	0.10	20	0	102	80-120	20.86	2.33	20	
Lead	20.26	0.20	20	0	101	80-120	20.82	2.73	20	
Zinc	19.04	10	20	0	95.2	80-120	19.43	2.03	20	

The following samples were analyzed in this batch:

19101546-01A	19101546-02A	19101546-03A
19101546-04A	19101546-05A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 07-Nov-19

Client: EQM
Project: Oronogo - Duenweg Mine Site; PN.: 030319.0001
WorkOrder: **19101546**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/sample	

ALS Environmental

Sample Receipt Checklist

Client Name: **EQM-JOPLIN** Date/Time Received: **31-Oct-19 11:50**

Work Order: **19101546** Received by: **SRM**

Checklist completed by Jan Wilcox (eSignature) 02-Nov-19 (Date) Reviewed by: Rob Nieman (eSignature) 05-Nov-19 (Date)

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS | Environmental
4388 Glendale Milford Rd.
Cincinnati, Ohio 45242
Phone: (800) 458-1493 or
(513) 733-5336
Fax: (513) 733-5347

ANALYTICAL REQUEST FORM

34108

☐ **REGULAR Status** 19101545

☐ **RUSH Status Required - ADDITIONAL CHARGE**

RESULTS REQUIRED BY _____ DATE

CONTACT ALS LABORATORY GROUP PRIOR TO SENDING SAMPLES

Date 10-23-19 Purchase Order No. _____

Company Name Environmental Quality Management

Address 315 S BLACKCAT RD

JOPLIN MO 64801
City State Zip

Send Report To Troy Cooper

Email Address trcooper@eqm.com

Telephone (417) 392-0532

Alt. Contact Name Angye Dragotta

Alt. Contact Info adragotta@eqm.com

Quote No. _____

Sampling Site Oronogo-Duenweg Mine Site

Date/Time of Collection 10-23-19, ~~10-24-19~~ Start 7:30 End 15:30

Project No. 030319.0001

Billing Address (if different)

EQM
1800 Carillon Blvd
Cincinnati OH 45240

Lab Use Only	Client Sample Number	Media Type	Sample Volume (L)	Sample Time (min.)	ANALYSES REQUESTED - Use Method Number if Known
01	Ø1	AIR	~~2.0LPM~~ 2.0LPM	960min	Lead, Zinc, Cadmium
02	Ø2	AIR	2.0LPM	960 min	Lead, Zinc, Cadmium
03	Ø3	AIR	2.0LPM	960 min	Lead, Zinc, Cadmium
04	Ø4	AIR	2.0 LPM	960 min	Lead, Zinc, Cadmium
05	Ø5 BLANK	AIR			Lead, Zinc, Cadmium

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
T Cooper	10/22/19 8:25am	J Montgomery	10/31/19 1150
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time

ALS LAB USE ONLY

COOLER TEMP: °C Taken with IR#:

COOLING METHOD: NONE COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT DROP BOX FEDEX UPS
STD MAIL PRTY MAIL ALS COURIER OTHER:

CUSTODY SEALS: COOLER PACKAGE SAMPLES NOT REQUIRED

EQUIP. RETURNED:

Ray Schmidt

30-Aug-2020

Angye Dragotta
Environmental Quality Management, Inc.
1800 Carillon Blvd
Cincinnati, OH 45240

Re: **Oronogo** Work Order: **20081732**

Dear Angye,

ALS Environmental received 1 sample on 21-Aug-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 54.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

Certificate No: MN 026-999-449

ALS Group, USA

Date: 30-Aug-20

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: **20081732**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20081732-01	Ray 01	Soil		8/20/2020 08:50	8/21/2020 09:30	☐

Client: Environmental Quality Management, Inc.
Project: Oronogo
WorkOrder: **20081732**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram
as noted	
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20081732

Case Narrative

Samples for the above noted Work Order were received on 8/21/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
Batch R296689, Method VOC_8260_SLL, Sample 20081732-01A MS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report

Batch R296689, Method VOC_8260_SLL, Sample 20081732-01A MS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Acetone

Batch R296689, Method VOC_8260_SLL, Sample 20081732-01A MSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: See QC report

Batch R296689, Method VOC_8260_SLL, Sample 20081732-01A MSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Acetone

Batch R296689, Method VOC_8260_SLL, Sample 20081732-01A MSD: The RPD between the MS and MSD was outside the control limit. The corresponding result in the parent sample should be considered estimated for this analyte: See QC report

Extractable Organics:
No other deviations or anomalies were noted.

Metals:
Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Mn, Zn

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: K

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Sb

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was outside of the control limit. However, the MSD recovery and the RPD between the MS and MSD was in control. No qualification is required for this analyte: V

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ba, Pb

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMS: The MS recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Mn, Zn

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMSD: The MSD recovery was outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Ba, Pb

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Sb

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for this analyte: K

Batch 163020, Method ICP_6020_S, Sample 20081732-01CMSD: The MSD recovery was

outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Al

Batch 163025, Method HG_7471_S, Sample 20081732-01CMS: The MS recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Hg

Batch 163025, Method HG_7471_S, Sample 20081732-01CMSD: The MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for this analyte: Hg

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: *30-Aug-20*

Client: Environmental Quality Management, Inc.
Project: Oronogo
Work Order: 20081732
Sample ID: Ray 01
Lab ID: 20081732-01
Collection Date: 8/20/2020 08:50 AM
Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS			**SW8082**	Prep: SW3546 8/24/20 14:29		Analyst: **RM**
Aroclor 1016	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1221	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1232	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1242	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1248	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1254	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Aroclor 1260	ND		0.071	mg/Kg-dry	1	8/24/2020 08:59 PM
Surr: Decachlorobiphenyl	*65.1*		*40-140*	*%REC*	1	8/24/2020 08:59 PM
Surr: Tetrachloro-m-xylene	*74.7*		*45-124*	*%REC*	1	8/24/2020 08:59 PM
PESTICIDES			**SW8081A**	Prep: SW3546 8/24/20 14:35		Analyst: **RM**
4,4´-DDD	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
4,4´-DDE	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
4,4´-DDT	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Aldrin	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
alpha-BHC	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
alpha-Chlordane	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
beta-BHC	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Chlordane, Technical	ND		0.027	mg/Kg-dry	1	8/25/2020 03:56 PM
delta-BHC	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Dieldrin	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endosulfan I	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endosulfan II	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endosulfan sulfate	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endrin	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endrin aldehyde	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Endrin ketone	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
gamma-BHC (Lindane)	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
gamma-Chlordane	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Heptachlor	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Heptachlor epoxide	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Methoxychlor	ND		0.011	mg/Kg-dry	1	8/25/2020 03:56 PM
Toxaphene	ND		0.064	mg/Kg-dry	1	8/25/2020 03:56 PM
Surr: Decachlorobiphenyl	*54.8*		*50-150*	*%REC*	1	8/25/2020 03:56 PM
Surr: Tetrachloro-m-xylene	*62.4*		*50-150*	*%REC*	1	8/25/2020 03:56 PM
MERCURY BY CVAA			**SW7471B**	Prep: SW7471 8/24/20 10:35		Analyst: **MAC**
Mercury	**0.47**		**0.035**	**mg/Kg-dry**	2	8/24/2020 01:19 PM
METALS BY ICP-MS			**SW6020B**	Prep: SW3050B 8/24/20 08:16		Analyst: **STP**

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20081732
Sample ID: Ray 01 **Lab ID:** 20081732-01
Collection Date: 8/20/2020 08:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Aluminum	**4,700**		**360**	**mg/Kg-dry**	100	8/25/2020 01:45 PM
Antimony	**0.62**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Arsenic	**2.5**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Barium	**140**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Beryllium	**0.58**		**0.18**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Cadmium	**3.6**		**0.18**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Calcium	**1,700**		**45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Chromium	**8.6**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Cobalt	**6.4**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Copper	**10**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Iron	**6,500**		**18**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Lead	**87**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Magnesium	**490**		**18**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Manganese	**720**		**4.5**	**mg/Kg-dry**	10	8/25/2020 01:55 PM
Nickel	**6.2**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Potassium	**470**		**18**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Selenium	ND		0.45	mg/Kg-dry	1	8/24/2020 07:09 PM
Silver	**0.77**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Sodium	ND		27	mg/Kg-dry	1	8/24/2020 07:09 PM
Thallium	ND		0.45	mg/Kg-dry	1	8/24/2020 07:09 PM
Vanadium	**15**		**0.45**	**mg/Kg-dry**	1	8/24/2020 07:09 PM
Zinc	**510**		**8.9**	**mg/Kg-dry**	10	8/25/2020 01:55 PM
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**	Prep: SW3546 8/24/20 17:02		Analyst: **EEW**
1,1`-Biphenyl	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4,5-Trichlorophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4,6-Trichlorophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4-Dichlorophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4-Dimethylphenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4-Dinitrophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,4-Dinitrotoluene	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2,6-Dinitrotoluene	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Chloronaphthalene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Chlorophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Methylnaphthalene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Methylphenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Nitroaniline	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
2-Nitrophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
3&4-Methylphenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
3,3´-Dichlorobenzidine	ND		0.18	mg/Kg-dry	1	8/25/2020 05:04 AM
3-Nitroaniline	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20081732
Sample ID: Ray 01 **Lab ID:** 20081732-01
Collection Date: 8/20/2020 08:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
4,6-Dinitro-2-methylphenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Bromophenyl phenyl ether	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Chloro-3-methylphenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Chloroaniline	ND		0.073	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Chlorophenyl phenyl ether	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Nitroaniline	ND		0.18	mg/Kg-dry	1	8/25/2020 05:04 AM
4-Nitrophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Acenaphthene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Acenaphthylene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Acetophenone	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Anthracene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Atrazine	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Benzaldehyde	ND		0.073	mg/Kg-dry	1	8/25/2020 05:04 AM
Benzo(a)anthracene	**0.015**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Benzo(a)pyrene	**0.019**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Benzo(b)fluoranthene	**0.033**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Benzo(g,h,i)perylene	**0.010**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Benzo(k)fluoranthene	**0.011**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Bis(2-chloroethoxy)methane	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Bis(2-chloroethyl)ether	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Bis(2-chloroisopropyl)ether	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Bis(2-ethylhexyl)phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Butyl benzyl phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Caprolactam	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Carbazole	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Chrysene	**0.010**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
D benzo(a,h)anthracene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
D benzofuran	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Diethyl phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Dimethyl phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Di-n-butyl phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Di-n-octyl phthalate	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Fluoranthene	**0.013**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Fluorene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Hexachlorobenzene	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Hexachlorobutadiene	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Hexachlorocyclopentadiene	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Hexachloroethane	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Indeno(1,2,3-cd)pyrene	**0.016**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Isophorone	ND		0.18	mg/Kg-dry	1	8/25/2020 05:04 AM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20081732
Sample ID: Ray 01 **Lab ID:** 20081732-01
Collection Date: 8/20/2020 08:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Naphthalene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Nitrobenzene	ND		0.18	mg/Kg-dry	1	8/25/2020 05:04 AM
N-Nitrosodi-n-propylamine	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
N-Nitrosodiphenylamine	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Pentachlorophenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Phenanthrene	ND		0.0073	mg/Kg-dry	1	8/25/2020 05:04 AM
Phenol	ND		0.036	mg/Kg-dry	1	8/25/2020 05:04 AM
Pyrene	**0.011**		**0.0073**	**mg/Kg-dry**	1	8/25/2020 05:04 AM
Surr: 2,4,6-Tribromophenol	*81.1*		*38-92*	*%REC*	1	8/25/2020 05:04 AM
Surr: 2-Fluorobiphenyl	*84.0*		*44-107*	*%REC*	1	8/25/2020 05:04 AM
Surr: 2-Fluorophenol	*72.8*		*37-109*	*%REC*	1	8/25/2020 05:04 AM
Surr: 4-Terphenyl-d14	*86.6*		*52-123*	*%REC*	1	8/25/2020 05:04 AM
Surr: Nitrobenzene-d5	*77.9*		*41-94*	*%REC*	1	8/25/2020 05:04 AM
Surr: Phenol-d6	*77.5*		*28-111*	*%REC*	1	8/25/2020 05:04 AM
VOLATILE ORGANIC COMPOUNDS			**SW8260C**	Prep: SW5035 8/21/20 10:51		Analyst: **MF**
Acetone	ND		280	µg/Kg	1	8/22/2020 01:41 AM
Surr: 1,2-Dichloroethane-d4	*102*		*70-130*	*%REC*	1	8/22/2020 01:41 AM
Surr: 4-Bromofluorobenzene	*102*		*70-130*	*%REC*	1	8/22/2020 01:41 AM
Surr: Dibromofluoromethane	*94.8*		*70-130*	*%REC*	1	8/22/2020 01:41 AM
Surr: Toluene-d8	*99.7*		*70-130*	*%REC*	1	8/22/2020 01:41 AM
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL			**SW8260C**			Analyst: **MF**
1,1,1-Trichloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,1,2,2-Tetrachloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,1,2-Trichloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,1,2-Trichlorotrifluoroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,1-Dichloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,1-Dichloroethene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2,4-Trichlorobenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2-Dibromo-3-chloropropane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2-Dibromoethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2-Dichlorobenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2-Dichloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,2-Dichloropropane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,3-Dichlorobenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
1,4-Dichlorobenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
2-Butanone	**0.023**		**0.013**	**mg/Kg-dry**	1.168	8/25/2020 02:28 PM
2-Methylnaphthalene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
4-Methyl-2-pentanone	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Benzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.
Project: Oronogo **Work Order:** 20081732
Sample ID: Ray 01 **Lab ID:** 20081732-01
Collection Date: 8/20/2020 08:50 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Bromoform	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Bromomethane	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Carbon disulfide	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Carbon tetrachloride	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Chlorobenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Chloroethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Chloroform	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Chloromethane	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
cis-1,2-Dichloroethene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
cis-1,3-Dichloropropene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Cyclohexane	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
D bromochloromethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Dichlorodifluoromethane	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Ethylbenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Isopropylbenzene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Methyl acetate	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Methyl tert-butyl ether	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Methylcyclohexane	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Methylene chloride	ND		0.013	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Styrene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Tetrachloroethene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Toluene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
trans-1,2-Dichloroethene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
trans-1,3-Dichloropropene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Trichloroethene	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Trichlorofluoromethane	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Vinyl chloride	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Xylenes, Total	ND		0.0065	mg/Kg-dry	1.168	8/25/2020 02:28 PM
Surr: 1,2-Dichloroethane-d4	*116*		*83-132*	*%REC*	1.168	8/25/2020 02:28 PM
Surr: 4-Bromofluorobenzene	*104*		*83-111*	*%REC*	1.168	8/25/2020 02:28 PM
Surr: Dibromofluoromethane	*106*		*77-125*	*%REC*	1.168	8/25/2020 02:28 PM
Surr: Toluene-d8	*95.9*		*86-108*	*%REC*	1.168	8/25/2020 02:28 PM
MOISTURE			**SW3550C**			Analyst: **KTP**
Moisture	**9.7**		**0.10**	**% of sample**	1	8/24/2020 10:15 AM
SUBCONTRACTED ANALYSES			**SUBCONTRACT**			Analyst: **ALS**
Subcontracted Analyses	**See report**			**as noted**	1	8/30/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Environmental Quality Management, Inc.

Work Order: 20081732

Project: Oronogo

QC BATCH REPORT

Batch ID: **163030** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-163030-163030** Units: **µg/Kg** Analysis Date: **8/24/2020 03:38 PM**

Client ID: Run ID: **GC14_200824A** SeqNo: **6658680** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	67								
Aroclor 1221	ND	67								
Aroclor 1232	ND	67								
Aroclor 1242	ND	67								
Aroclor 1248	ND	67								
Aroclor 1254	ND	67								
Aroclor 1260	ND	67								
Surr: Decachlorobiphenyl	*35.8*	0	*33.3*	0	*108*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*36.1*	0	*33.3*	0	*108*	*45-124*	0			

LCS Sample ID: **PLCSS1-163030-163030** Units: **µg/Kg** Analysis Date: **8/24/2020 03:53 PM**

Client ID: Run ID: **GC14_200824A** SeqNo: **6658681** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	758.8	67	833	0	91.1	50-130	0			
Aroclor 1260	768.3	67	833	0	92.2	50-130	0			
Surr: Decachlorobiphenyl	*34.43*	0	*33.3*	0	*103*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*32.78*	0	*33.3*	0	*98.4*	*45-124*	0			

MS Sample ID: **20081688-01B MS** Units: **µg/Kg** Analysis Date: **8/24/2020 04:09 PM**

Client ID: Run ID: **GC14_200824A** SeqNo: **6658682** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	766.4	66	828.3	0	92.5	40-140	0			
Aroclor 1260	762.2	66	828.3	0	92	40-140	0			
Surr: Decachlorobiphenyl	*33.28*	0	*33.11*	0	*101*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*32.63*	0	*33.11*	0	*98.5*	*45-124*	0			

MSD Sample ID: **20081688-01B MSD** Units: **µg/Kg** Analysis Date: **8/24/2020 04:24 PM**

Client ID: Run ID: **GC14_200824A** SeqNo: **6658683** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	747.5	66	819.8	0	91.2	40-140	766.4	2.49	50	
Aroclor 1260	725.1	66	819.8	0	88.5	40-140	762.2	4.98	50	
Surr: Decachlorobiphenyl	*32.53*	0	*32.77*	0	*99.2*	*40-140*	33.28	*2.29*	*50*	
Surr: Tetrachloro-m-xylene	*32.61*	0	*32.77*	0	*99.5*	*45-124*	32.63	*0.0754*	*50*	

The following samples were analyzed in this batch: 20081732-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163031** Instrument ID **GC12** Method: **SW8081A**

MBLK	Sample ID: **PBLKS1-163031-163031**				Units: **µg/Kg**			Analysis Date: **8/25/2020 02:47 PM**		
Client ID:		Run ID: **GC12_200825A**			SeqNo: **6660261**		Prep Date: **8/24/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	ND	10								
4,4´-DDE	ND	10								
4,4´-DDT	ND	10								
Aldrin	ND	10								
alpha-BHC	ND	10								
alpha-Chlordane	ND	10								
beta-BHC	ND	10								
Chlordane, Technical	ND	25								
delta-BHC	ND	10								
Dieldrin	ND	10								
Endosulfan I	ND	10								
Endosulfan II	ND	10								
Endosulfan sulfate	ND	10								
Endrin	ND	10								
Endrin aldehyde	ND	10								
Endrin ketone	ND	10								
gamma-BHC (Lindane)	ND	10								
gamma-Chlordane	ND	10								
Heptachlor	ND	10								
Heptachlor epoxide	ND	10								
Methoxychlor	ND	10								
Toxaphene	ND	60								
Surr: Decachlorobiphenyl	*32.67*	0	*33.3*	0	*98.1*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*32.08*	0	*33.3*	0	*96.3*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163031** Instrument ID **GC12** Method: **SW8081A**

LCS	Sample ID: **PLCSS1-163031-163031**				Units: **µg/Kg**			Analysis Date: **8/25/2020 03:01 PM**			
Client ID:	Run ID: **GC12_200825A**				SeqNo: **6660262**		Prep Date: **8/24/2020**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	29.52	10	33.33	0	88.6	50-150	0			
4,4´-DDE	30.3	10	33.33	0	90.9	50-150	0			
4,4´-DDT	28.23	10	33.33	0	84.7	50-150	0			
Aldrin	30.53	10	33.33	0	91.6	50-150	0			
alpha-BHC	30.78	10	33.33	0	92.4	50-150	0			
alpha-Chlordane	30.9	10	33.33	0	92.7	50-150	0			
beta-BHC	30.13	10	33.33	0	90.4	50-150	0			
delta-BHC	30.33	10	33.33	0	91	50-150	0			
Dieldrin	31	10	33.33	0	93	50-150	0			
Endosulfan I	30.55	10	33.33	0	91.7	50-150	0			
Endosulfan II	30.27	10	33.33	0	90.8	50-150	0			
Endosulfan sulfate	31.07	10	33.33	0	93.2	50-150	0			
Endrin	32.82	10	33.33	0	98.5	50-150	0			
Endrin aldehyde	29.48	10	33.33	0	88.5	50-150	0			
Endrin ketone	29.65	10	33.33	0	89	50-150	0			
gamma-BHC (Lindane)	29.92	10	33.33	0	89.8	50-150	0			
gamma-Chlordane	30.72	10	33.33	0	92.2	50-150	0			
Heptachlor	22.57	10	33.33	0	67.7	50-150	0			
Heptachlor epoxide	30.9	10	33.33	0	92.7	50-150	0			
Methoxychlor	28.38	10	33.33	0	85.2	50-150	0			
Surr: Decachlorobiphenyl	*31.45*	0	*33.3*	0	*94.4*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.45*	0	*33.3*	0	*91.4*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163031** Instrument ID **GC12** Method: **SW8081A**

MS Sample ID: **20081688-01B MS** Units: **µg/Kg** Analysis Date: **8/25/2020 03:15 PM**
Client ID: Run ID: **GC12_200825A** SeqNo: **6660263** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	22.37	9.7	32.18	2.774	60.9	50-150	0			
4,4´-DDE	37.01	9.7	32.18	26.79	31.8	50-150	0			S
4,4´-DDT	31.51	9.7	32.18	13.41	56.2	50-150	0			
Aldrin	20.29	9.7	32.18	0	63.1	50-150	0			
alpha-BHC	20.57	9.7	32.18	0	63.9	50-150	0			
alpha-Chlordane	25.17	9.7	32.18	7.304	55.5	50-150	0			
beta-BHC	19.28	9.7	32.18	0	59.9	50-150	0			
delta-BHC	20.21	9.7	32.18	0	62.8	50-150	0			
Dieldrin	21.71	9.7	32.18	1.97	61.3	50-150	0			
Endosulfan I	20.63	9.7	32.18	0	64.1	50-150	0			
Endosulfan II	19.57	9.7	32.18	0	60.8	50-150	0			
Endosulfan sulfate	20.74	9.7	32.18	0	64.5	50-150	0			
Endrin	22.3	9.7	32.18	0	69.3	50-150	0			
Endrin aldehyde	17.81	9.7	32.18	0	55.4	50-150	0			
Endrin ketone	19.95	9.7	32.18	0	62	50-150	0			
gamma-BHC (Lindane)	20.57	9.7	32.18	0	63.9	50-150	0			
gamma-Chlordane	22.19	9.7	32.18	4.645	54.5	50-150	0			
Heptachlor	19.71	9.7	32.18	0	61.3	50-150	0			
Heptachlor epoxide	21.15	9.7	32.18	2.101	59.2	50-150	0			
Methoxychlor	23.59	9.7	32.18	0	73.3	50-150	0			
Surr: Decachlorobiphenyl	*22.59*	0	*32.15*	0	*70.3*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*20.61*	0	*32.15*	0	*64.1*	*50-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163031** Instrument ID **GC12** Method: **SW8081A**

MSD Sample ID: **20081688-01B MSD** Units: **µg/Kg** Analysis Date: **8/25/2020 03:28 PM**
Client ID: Run ID: **GC12_200825A** SeqNo: **6660264** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	25.52	10	33.29	2.774	68.3	50-150	22.37	13.2	35	
4,4´-DDE	49.22	10	33.29	26.79	67.4	50-150	37.01	28.3	35	
4,4´-DDT	39.1	10	33.29	13.41	77.2	50-150	31.51	21.5	35	
Aldrin	22.95	10	33.29	0	69	50-150	20.29	12.3	35	
alpha-BHC	23.57	10	33.29	0	70.8	50-150	20.57	13.6	35	
alpha-Chlordane	29.43	10	33.29	7.304	66.5	50-150	25.17	15.6	35	
beta-BHC	22.02	10	33.29	0	66.2	50-150	19.28	13.3	35	
delta-BHC	22.7	10	33.29	0	68.2	50-150	20.21	11.6	35	
Dieldrin	25	10	33.29	1.97	69.2	50-150	21.71	14.1	35	
Endosulfan I	23.3	10	33.29	0	70	50-150	20.63	12.2	35	
Endosulfan II	21.46	10	33.29	0	64.5	50-150	19.57	9.2	35	
Endosulfan sulfate	22.44	10	33.29	0	67.4	50-150	20.74	7.85	35	
Endrin	24.8	10	33.29	0	74.5	50-150	22.3	10.6	35	
Endrin aldehyde	18.46	10	33.29	0	55.5	50-150	17.81	3.56	35	
Endrin ketone	21.87	10	33.29	0	65.7	50-150	19.95	9.17	35	
gamma-BHC (Lindane)	23.69	10	33.29	0	71.2	50-150	20.57	14.1	35	
gamma-Chlordane	25.4	10	33.29	4.645	62.4	50-150	22.19	13.5	35	
Heptachlor	23.05	10	33.29	0	69.3	50-150	19.71	15.6	35	
Heptachlor epoxide	24.19	10	33.29	2.101	66.3	50-150	21.15	13.4	35	
Methoxychlor	24.6	10	33.29	0	73.9	50-150	23.59	4.19	35	
Surr: Decachlorobiphenyl	*25.12*	0	*33.26*	0	*75.5*	*50-150*	22.59	*10.6*	*35*	
Surr: Tetrachloro-m-xylene	*24.24*	0	*33.26*	0	*72.9*	*50-150*	20.61	*16.1*	*35*	

The following samples were analyzed in this batch: 20081732-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163025** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-163025-163025** Units: **mg/Kg** Analysis Date: **8/24/2020 12:18 PM**
Client ID: Run ID: **HG4_200824A** SeqNo: **6655526** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-163025-163025** Units: **mg/Kg** Analysis Date: **8/24/2020 12:19 PM**
Client ID: Run ID: **HG4_200824A** SeqNo: **6655527** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1825	0.020	0.1665	0	110	80-120	0			

MS Sample ID: **20081732-01CMS** Units: **mg/Kg** Analysis Date: **8/24/2020 01:21 PM**
Client ID: **Ray 01** Run ID: **HG4_200824A** SeqNo: **6655559** Prep Date: **8/24/2020** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.5038	0.030	0.1261	0.4263	61.4	75-125	0			S

MSD Sample ID: **20081732-01CMSD** Units: **mg/Kg** Analysis Date: **8/24/2020 01:23 PM**
Client ID: **Ray 01** Run ID: **HG4_200824A** SeqNo: **6655560** Prep Date: **8/24/2020** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.4765	0.030	0.1269	0.4263	39.5	75-125	0.5038	5.57	35	S

The following samples were analyzed in this batch: 20081732-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163020** Instrument ID **ICPMS4** Method: **SW6020B**

MBLK	Sample ID: **MBLK-163020-163020**				Units: **mg/Kg**			Analysis Date: **8/24/2020 07:05 PM**		
Client ID:		Run ID: **ICPMS4_200824B**			SeqNo: **6656747**		Prep Date: **8/24/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	ND	2.0								
Antimony	ND	0.25								
Arsenic	ND	0.25								
Barium	ND	0.25								
Beryllium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	25								
Chromium	ND	0.25								
Cobalt	ND	0.25								
Copper	ND	0.25								
Iron	ND	10								
Lead	ND	0.25								
Magnesium	ND	10								
Manganese	ND	0.25								
Nickel	ND	0.25								
Potassium	ND	10								
Selenium	ND	0.25								
Silver	ND	0.25								
Sodium	ND	15								
Thallium	ND	0.25								
Vanadium	ND	0.25								
Zinc	ND	0.50								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163020** Instrument ID **ICPMS4** Method: **SW6020B**

LCS	Sample ID: **LCS-163020-163020**				Units: **mg/Kg**			Analysis Date: **8/24/2020 07:07 PM**			
Client ID:		Run ID: **ICPMS4_200824B**			SeqNo: **6656748**			Prep Date: **8/24/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	5.668	2.0	5	0	113	80-120	0			
Antimony	5.489	0.25	5	0	110	80-120	0			
Arsenic	5.262	0.25	5	0	105	80-120	0			
Barium	5.785	0.25	5	0	116	80-120	0			
Beryllium	5.512	0.10	5	0	110	80-120	0			
Cadmium	5.812	0.10	5	0	116	80-120	0			
Calcium	579.2	25	500	0	116	80-120	0			
Chromium	5.537	0.25	5	0	111	80-120	0			
Cobalt	5.393	0.25	5	0	108	80-120	0			
Copper	5.538	0.25	5	0	111	80-120	0			
Iron	545.7	10	500	0	109	80-120	0			
Lead	5.786	0.25	5	0	116	80-120	0			
Magnesium	556.8	10	500	0	111	80-120	0			
Manganese	5.616	0.25	5	0	112	80-120	0			
Nickel	5.398	0.25	5	0	108	80-120	0			
Potassium	551.4	10	500	0	110	80-120	0			
Selenium	5.58	0.25	5	0	112	80-120	0			
Silver	5.672	0.25	5	0	113	80-120	0			
Sodium	548.8	15	500	0	110	80-120	0			
Thallium	5.48	0.25	5	0	110	80-120	0			
Vanadium	5.985	0.25	5	0	120	80-120	0			
Zinc	5.364	0.50	5	0	107	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163020** Instrument ID **ICPMS4** Method: **SW6020B**

MS Sample ID: **20081732-01CMS** Units: **mg/Kg** Analysis Date: **8/24/2020 07:10 PM**
Client ID: **Ray 01** Run ID: **ICPMS4_200824B** SeqNo: **6656750** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.035	0.39	7.849	0.5561	69.8	75-125	0			S
Arsenic	9.089	0.39	7.849	2.271	86.9	75-125	0			
Barium	120.8	0.39	7.849	123.9	-40.2	75-125	0			SO
Beryllium	8.41	0.16	7.849	0.5272	100	75-125	0			
Cadmium	10.5	0.16	7.849	3.281	92	75-125	0			
Calcium	2150	39	784.9	1526	79.4	75-125	0			
Chromium	15.94	0.39	7.849	7.73	105	75-125	0			
Cobalt	12.08	0.39	7.849	5.752	80.6	75-125	0			
Copper	16.25	0.39	7.849	9.398	87.2	75-125	0			
Iron	6806	16	784.9	5878	118	75-125	0			O
Lead	80.87	0.39	7.849	78.16	34.4	75-125	0			SO
Magnesium	1418	16	784.9	441.1	125	75-125	0			
Nickel	13.18	0.39	7.849	5.637	96.1	75-125	0			
Potassium	1485	16	784.9	422	135	75-125	0			S
Selenium	7.216	0.39	7.849	0.3704	87.2	75-125	0			
Silver	7.992	0.39	7.849	0.6991	92.9	75-125	0			
Sodium	811.4	24	784.9	17.28	101	75-125	0			
Thallium	7.757	0.39	7.849	0.1107	97.4	75-125	0			
Vanadium	23.32	0.39	7.849	13.43	126	75-125	0			S

MS Sample ID: **20081732-01CMS** Units: **mg/Kg** Analysis Date: **8/25/2020 01:47 PM**
Client ID: **Ray 01** Run ID: **ICPMS3_200825B** SeqNo: **6658390** Prep Date: **8/24/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	7485	310	7.849	4203	41800	75-125	0			SO

MS Sample ID: **20081732-01CMS** Units: **mg/Kg** Analysis Date: **8/25/2020 01:56 PM**
Client ID: **Ray 01** Run ID: **ICPMS3_200825B** SeqNo: **6658403** Prep Date: **8/24/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	580.1	3.9	7.849	653.2	-931	75-125	0			SO
Zinc	534.6	7.8	7.849	460.3	947	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163020** Instrument ID **ICPMS4** Method: **SW6020B**

MSD Sample ID: **20081732-01CMSD** Units: **mg/Kg** Analysis Date: **8/24/2020 07:12 PM**
Client ID: **Ray 01** Run ID: **ICPMS4_200824B** SeqNo: **6656751** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.235	0.40	7.924	0.5561	71.7	75-125	6.035	3.25	20	S
Arsenic	9.276	0.40	7.924	2.271	88.4	75-125	9.089	2.04	20	
Barium	120.4	0.40	7.924	123.9	-44.8	75-125	120.8	0.323	20	SO
Beryllium	8.502	0.16	7.924	0.5272	101	75-125	8.41	1.08	20	
Cadmium	9.981	0.16	7.924	3.281	84.6	75-125	10.5	5.09	20	
Calcium	2274	40	792.4	1526	94.3	75-125	2150	5.6	20	
Chromium	16.48	0.40	7.924	7.73	110	75-125	15.94	3.35	20	
Cobalt	12.39	0.40	7.924	5.752	83.8	75-125	12.08	2.51	20	
Copper	16.65	0.40	7.924	9.398	91.5	75-125	16.25	2.46	20	
Iron	6777	16	792.4	5878	114	75-125	6806	0.425	20	O
Lead	66.68	0.40	7.924	78.16	-145	75-125	80.87	19.2	20	SO
Magnesium	1392	16	792.4	441.1	120	75-125	1418	1.86	20	
Nickel	13.31	0.40	7.924	5.637	96.8	75-125	13.18	1.01	20	
Potassium	1457	16	792.4	422	131	75-125	1485	1.88	20	S
Selenium	7.397	0.40	7.924	0.3704	88.7	75-125	7.216	2.48	20	
Silver	8.238	0.40	7.924	0.6991	95.1	75-125	7.992	3.04	20	
Sodium	824.8	24	792.4	17.28	102	75-125	811.4	1.64	20	
Thallium	7.737	0.40	7.924	0.1107	96.2	75-125	7.757	0.253	20	
Vanadium	23.31	0.40	7.924	13.43	125	75-125	23.32	0.00772	20	

MSD Sample ID: **20081732-01CMSD** Units: **mg/Kg** Analysis Date: **8/25/2020 01:48 PM**
Client ID: **Ray 01** Run ID: **ICPMS3_200825B** SeqNo: **6658392** Prep Date: **8/24/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	7303	320	7.924	4203	39100	75-125	7587	3.81	20	SO

MSD Sample ID: **20081732-01CMSD** Units: **mg/Kg** Analysis Date: **8/25/2020 01:58 PM**
Client ID: **Ray 01** Run ID: **ICPMS3_200825B** SeqNo: **6658405** Prep Date: **8/24/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	611.3	4.0	7.924	653.2	-529	75-125	580.1	5.23	20	SO
Zinc	427.8	7.9	7.924	460.3	-410	75-125	534.6	22.2	20	SRO

The following samples were analyzed in this batch: 20081732-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-163029-163029** Units: **µg/Kg** Analysis Date: **8/25/2020 01:27 PM**
Client ID: Run ID: **SVMS10_200825A** SeqNo: **6657857** Prep Date: **8/24/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	ND	33								
2,4,5-Trichlorophenol	ND	33								
2,4,6-Trichlorophenol	ND	33								
2,4-Dichlorophenol	ND	33								
2,4-Dimethylphenol	ND	33								
2,4-Dinitrophenol	ND	33								
2,4-Dinitrotoluene	ND	33								
2,6-Dinitrotoluene	ND	33								
2-Chloronaphthalene	ND	6.7								
2-Chlorophenol	ND	33								
2-Methylnaphthalene	ND	6.7								
2-Methylphenol	ND	33								
2-Nitroaniline	ND	33								
2-Nitrophenol	ND	33								
3&4-Methylphenol	ND	33								
3,3´-Dichlorobenzidine	ND	170								
3-Nitroaniline	ND	33								
4,6-Dinitro-2-methylphenol	ND	33								
4-Bromophenyl phenyl ether	ND	33								
4-Chloro-3-methylphenol	ND	33								
4-Chloroaniline	ND	67								
4-Chlorophenyl phenyl ether	ND	33								
4-Nitroaniline	ND	170								
4-Nitrophenol	ND	33								
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Acetophenone	ND	33								
Anthracene	ND	6.7								
Atrazine	ND	33								
Benzaldehyde	ND	67								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Bis(2-chloroethoxy)methane	ND	33								
Bis(2-chloroethyl)ether	ND	33								
Bis(2-chloroisopropyl)ether	ND	33								
Bis(2-ethylhexyl)phthalate	ND	33								
Butyl benzyl phthalate	ND	33								
Caprolactam	ND	33								
Carbazole	ND	33								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

Chrysene	ND	6.7					
Dibenzo(a,h)anthracene	ND	6.7					
Dibenzofuran	ND	33					
Diethyl phthalate	ND	33					
Dimethyl phthalate	ND	33					
Di-n-butyl phthalate	ND	33					
Di-n-octyl phthalate	ND	33					
Fluoranthene	ND	6.7					
Fluorene	ND	6.7					
Hexachlorobenzene	ND	33					
Hexachlorobutadiene	ND	33					
Hexachlorocyclopentadiene	ND	33					
Hexachloroethane	ND	33					
Indeno(1,2,3-cd)pyrene	ND	6.7					
Isophorone	ND	170					
Naphthalene	ND	6.7					
Nitrobenzene	ND	170					
N-Nitrosodi-n-propylamine	ND	33					
N-Nitrosodiphenylamine	ND	33					
Pentachlorophenol	ND	33					
Phenanthrene	ND	6.7					
Phenol	ND	33					
Pyrene	ND	6.7					
Surr: 2,4,6-Tribromophenol	*2385*	0	*3333*	0	*71.5*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2602*	0	*3333*	0	*78.1*	*44-107*	0
Surr: 2-Fluorophenol	*2534*	0	*3333*	0	*76*	*37-109*	0
Surr: 4-Terphenyl-d14	*2889*	0	*3333*	0	*86.7*	*52-123*	0
Surr: Nitrobenzene-d5	*2472*	0	*3333*	0	*74.2*	*41-94*	0
Surr: Phenol-d6	*2640*	0	*3333*	0	*79.2*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

LCS	Sample ID: **SLCSS1-163029-163029**				Units: **µg/Kg**		Analysis Date: **8/24/2020 08:53 PM**			
Client ID:	Run ID: **SVMS10_200824A**				SeqNo: **6657879**		Prep Date: **8/24/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1187	33	1333	0	89.1	53-97	0			
2,4,5-Trichlorophenol	1059	33	1333	0	79.5	52-111	0			
2,4,6-Trichlorophenol	1067	33	1333	0	80	46-105	0			
2,4-Dichlorophenol	1072	33	1333	0	80.4	47-96	0			
2,4-Dimethylphenol	1184	33	1333	0	88.8	49-97	0			
2,4-Dinitrophenol	674	33	1333	0	50.6	10-106	0			
2,4-Dinitrotoluene	1120	33	1333	0	84	58-110	0			
2,6-Dinitrotoluene	1120	33	1333	0	84	59-108	0			
2-Chloronaphthalene	1105	6.7	1333	0	82.9	56-104	0			
2-Chlorophenol	1034	33	1333	0	77.6	50-104	0			
2-Methylnaphthalene	1136	6.7	1333	0	85.2	54-96	0			
2-Methylphenol	1113	33	1333	0	83.5	49-105	0			
2-Nitroaniline	1146	33	1333	0	86	54-107	0			
2-Nitrophenol	1032	33	1333	0	77.4	51-94	0			
3&4-Methylphenol	1073	33	1333	0	80.5	48-105	0			
3,3´-Dichlorobenzidine	891.3	170	1333	0	66.9	39-99	0			
3-Nitroaniline	912	33	1333	0	68.4	17-92	0			
4,6-Dinitro-2-methylphenol	1004	33	1333	0	75.3	32-103	0			
4-Bromophenyl phenyl ether	1169	33	1333	0	87.7	60-106	0			
4-Chloro-3-methylphenol	1134	33	1333	0	85.1	51-101	0			
4-Chloroaniline	1159	67	1333	0	87	27-110	0			
4-Chlorophenyl phenyl ether	1136	33	1333	0	85.2	58-106	0			
4-Nitroaniline	698	170	1333	0	52.4	21-100	0			
4-Nitrophenol	1060	33	1333	0	79.5	29-120	0			
Acenaphthene	1151	6.7	1333	0	86.3	55-101	0			
Acenaphthylene	1187	6.7	1333	0	89	59-106	0			
Acetophenone	1109	33	1333	0	83.2	51-100	0			
Anthracene	1186	6.7	1333	0	89	67-105	0			
Atrazine	1256	33	1333	0	94.2	45-125	0			
Benzaldehyde	364.7	67	1333	0	27.4	10-120	0			
Benzo(a)anthracene	1204	6.7	1333	0	90.3	68-105	0			
Benzo(a)pyrene	1161	6.7	1333	0	87.1	68-110	0			
Benzo(b)fluoranthene	1186	6.7	1333	0	89	65-110	0			
Benzo(g,h,i)perylene	1305	6.7	1333	0	97.9	60-120	0			
Benzo(k)fluoranthene	1162	6.7	1333	0	87.2	66-113	0			
Bis(2-chloroethoxy)methane	1093	33	1333	0	82	53-96	0			
Bis(2-chloroethyl)ether	1085	33	1333	0	81.4	47-108	0			
Bis(2-chloroisopropyl)ether	1077	33	1333	0	80.8	47-107	0			
Bis(2-ethylhexyl)phthalate	1258	33	1333	0	94.4	59-117	0			
Butyl benzyl phthalate	1205	33	1333	0	90.4	59-106	0			
Caprolactam	1081	33	1333	0	81.1	42-105	0			
Carbazole	1187	33	1333	0	89	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

Chrysene	1204	6.7	1333	0	90.3	68-108	0
Dibenzo(a,h)anthracene	1203	6.7	1333	0	90.2	62-119	0
Dibenzofuran	1139	33	1333	0	85.5	60-104	0
Diethyl phthalate	1123	33	1333	0	84.2	62-111	0
Dimethyl phthalate	1132	33	1333	0	84.9	62-106	0
Di-n-butyl phthalate	1228	33	1333	0	92.1	59-105	0
Di-n-octyl phthalate	1249	33	1333	0	93.7	51-123	0
Fluoranthene	1180	6.7	1333	0	88.5	67-106	0
Fluorene	1160	6.7	1333	0	87	59-107	0
Hexachlorobenzene	1150	33	1333	0	86.3	62-103	0
Hexachlorobutadiene	1052	33	1333	0	78.9	51-94	0
Hexachlorocyclopentadiene	1314	33	1333	0	98.6	25-120	0
Hexachloroethane	1049	33	1333	0	78.7	55-93	0
Indeno(1,2,3-cd)pyrene	1217	6.7	1333	0	91.3	56-120	0
Isophorone	1125	170	1333	0	84.4	52-99	0
Naphthalene	1091	6.7	1333	0	81.9	46-98	0
Nitrobenzene	1091	170	1333	0	81.9	53-95	0
N-Nitrosodi-n-propylamine	1084	33	1333	0	81.3	50-104	0
N-Nitrosodiphenylamine	1181	33	1333	0	88.6	63-107	0
Pentachlorophenol	1063	33	1333	0	79.7	34-106	0
Phenanthrene	1150	6.7	1333	0	86.3	66-101	0
Phenol	1058	33	1333	0	79.4	44-109	0
Pyrene	1228	6.7	1333	0	92.1	60-119	0
Surr: 2,4,6-Tribromophenol	*2769*	0	*3333*	0	*83.1*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2651*	0	*3333*	0	*79.5*	*44-107*	0
Surr: 2-Fluorophenol	*2608*	0	*3333*	0	*78.2*	*37-109*	0
Surr: 4-Terphenyl-d14	*3013*	0	*3333*	0	*90.4*	*52-123*	0
Surr: Nitrobenzene-d5	*2713*	0	*3333*	0	*81.4*	*41-94*	0
Surr: Phenol-d6	*2811*	0	*3333*	0	*84.3*	*28-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

MS	Sample ID: **20081677-01B MS**				Units: **µg/Kg**		Analysis Date: **8/25/2020 04:37 PM**			
Client ID:		Run ID: **SVMS10_200825A**			SeqNo: **6661796**		Prep Date: **8/24/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1081	320	1302	0	83	53-97	0			
2,4,5-Trichlorophenol	1081	320	1302	0	83	52-111	0			
2,4,6-Trichlorophenol	1094	320	1302	0	84	46-105	0			
2,4-Dichlorophenol	1009	320	1302	0	77.5	47-96	0			
2,4-Dimethylphenol	1113	320	1302	0	85.5	49-97	0			
2,4-Dinitrophenol	ND	320	1302	0	0	10-106	0			S
2,4-Dinitrotoluene	1035	320	1302	0	79.5	58-110	0			
2,6-Dinitrotoluene	1035	320	1302	0	79.5	59-108	0			
2-Chloronaphthalene	1028	65	1302	0	79	56-104	0			
2-Chlorophenol	1074	320	1302	0	82.5	50-104	0			
2-Methylnaphthalene	1002	65	1302	0	77	54-96	0			
2-Methylphenol	1074	320	1302	0	82.5	49-105	0			
2-Nitroaniline	1068	320	1302	0	82	54-107	0			
2-Nitrophenol	995.9	320	1302	0	76.5	51-94	0			
3&4-Methylphenol	1028	320	1302	0	79	48-105	0			
3,3´-Dichlorobenzidine	1068	1,600	1302	0	82	39-99	0			J
3-Nitroaniline	807.1	320	1302	0	62	17-92	0			
4,6-Dinitro-2-methylphenol	260.4	320	1302	0	20	32-103	0			JS
4-Bromophenyl phenyl ether	1113	320	1302	0	85.5	60-106	0			
4-Chloro-3-methylphenol	1035	320	1302	0	79.5	51-101	0			
4-Chloroaniline	813.6	650	1302	0	62.5	27-110	0			
4-Chlorophenyl phenyl ether	1041	320	1302	0	80	58-106	0			
4-Nitroaniline	943.8	1,600	1302	0	72.5	21-100	0			J
4-Nitrophenol	ND	320	1302	0	0	29-120	0			S
Acenaphthene	1068	65	1302	0	82	55-101	0			
Acenaphthylene	1107	65	1302	0	85	59-106	0			
Acetophenone	950.3	320	1302	0	73	51-100	0			
Anthracene	1081	65	1302	0	83	67-105	0			
Atrazine	1126	320	1302	0	86.5	45-125	0			
Benzaldehyde	ND	650	1302	0	0	10-120	0			S
Benzo(a)anthracene	1373	65	1302	199.4	90.2	68-105	0			
Benzo(a)pyrene	1302	65	1302	173.6	86.7	68-110	0			
Benzo(b)fluoranthene	1426	65	1302	276.5	88.3	65-110	0			
Benzo(g,h,i)perylene	1634	65	1302	77.18	120	60-120	0			
Benzo(k)fluoranthene	1211	65	1302	109.3	84.6	66-113	0			
Bis(2-chloroethoxy)methane	930.8	320	1302	0	71.5	53-96	0			
Bis(2-chloroethyl)ether	1087	320	1302	0	83.5	47-108	0			
Bis(2-chloroisopropyl)ether	982.9	320	1302	0	75.5	47-107	0			
Bis(2-ethylhexyl)phthalate	1198	320	1302	0	92	59-117	0			
Butyl benzyl phthalate	1204	320	1302	0	92.5	59-106	0			
Caprolactam	956.8	320	1302	0	73.5	42-105	0			
Carbazole	1087	320	1302	0	83.5	67-108	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

Chrysene	1334	65	1302	173.6	89.2	68-108	0	
Dibenzo(a,h)anthracene	1243	65	1302	0	95.5	62-119	0	
Dibenzofuran	1126	320	1302	0	86.5	60-104	0	
Diethyl phthalate	1028	320	1302	0	79	62-111	0	
Dimethyl phthalate	982.9	320	1302	0	75.5	62-106	0	
Di-n-butyl phthalate	1126	320	1302	0	86.5	59-105	0	
Di-n-octyl phthalate	1191	320	1302	0	91.5	51-123	0	
Fluoranthene	1406	65	1302	289.4	85.8	67-106	0	
Fluorene	1081	65	1302	0	83	59-107	0	
Hexachlorobenzene	1035	320	1302	0	79.5	62-103	0	
Hexachlorobutadiene	1009	320	1302	0	77.5	51-94	0	
Hexachlorocyclopentadiene	318.9	320	1302	0	24.5	25-120	0	JS
Hexachloroethane	716	320	1302	0	55	55-93	0	
Indeno(1,2,3-cd)pyrene	1478	65	1302	141.5	103	56-120	0	
Isophorone	937.3	1,600	1302	0	72	52-99	0	J
Naphthalene	995.9	65	1302	0	76.5	46-98	0	
Nitrobenzene	976.4	1,600	1302	0	75	53-95	0	J
N-Nitrosodi-n-propylamine	956.8	320	1302	0	73.5	50-104	0	
N-Nitrosodiphenylamine	1107	320	1302	0	85	63-107	0	
Pentachlorophenol	533.8	320	1302	0	41	34-106	0	
Phenanthrene	1224	65	1302	96.47	86.6	66-101	0	
Phenol	1100	320	1302	0	84.5	44-109	0	
Pyrene	1478	65	1302	276.5	92.3	60-119	0	
Surr: 2,4,6-Tribromophenol	*2441*	0	*3254*	0	*75*	*38-92*	0	
Surr: 2-Fluorobiphenyl	*2493*	0	*3254*	0	*76.6*	*44-107*	0	
Surr: 2-Fluorophenol	*2467*	0	*3254*	0	*75.8*	*37-109*	0	
Surr: 4-Terphenyl-d14	*2955*	0	*3254*	0	*90.8*	*52-123*	0	
Surr: Nitrobenzene-d5	*2298*	0	*3254*	0	*70.6*	*41-94*	0	
Surr: Phenol-d6	*2526*	0	*3254*	0	*77.6*	*28-111*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

MSD	Sample ID: **20081677-01B MSD**				Units: **µg/Kg**		Analysis Date: **8/25/2020 05:04 PM**			
Client ID:		Run ID: **SVMS10_200825A**			SeqNo: **6661797**		Prep Date: **8/24/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	1007	330	1316	0	76.5	53-97	1081	7.01	30	
2,4,5-Trichlorophenol	987.6	330	1316	0	75	52-111	1081	8.99	30	
2,4,6-Trichlorophenol	954.6	330	1316	0	72.5	46-105	1094	13.6	30	
2,4-Dichlorophenol	948.1	330	1316	0	72	47-96	1009	6.22	30	
2,4-Dimethylphenol	1014	330	1316	0	77	49-97	1113	9.33	30	
2,4-Dinitrophenol	ND	330	1316	0	0	10-106	0	0	30	S
2,4-Dinitrotoluene	915.1	330	1316	0	69.5	58-110	1035	12.3	30	
2,6-Dinitrotoluene	915.1	330	1316	0	69.5	59-108	1035	12.3	30	
2-Chloronaphthalene	981	66	1316	0	74.5	56-104	1028	4.73	30	
2-Chlorophenol	915.1	330	1316	0	69.5	50-104	1074	16	30	
2-Methylnaphthalene	954.6	66	1316	0	72.5	54-96	1002	4.88	30	
2-Methylphenol	921.7	330	1316	0	70	49-105	1074	15.3	30	
2-Nitroaniline	967.8	330	1316	0	73.5	54-107	1068	9.8	30	
2-Nitrophenol	902	330	1316	0	68.5	51-94	995.9	9.9	30	
3&4-Methylphenol	895.4	330	1316	0	68	48-105	1028	13.8	30	
3,3´-Dichlorobenzidine	961.2	1,600	1316	0	73	39-99	1068	0	30	J
3-Nitroaniline	697.9	330	1316	0	53	17-92	807.1	14.5	30	
4,6-Dinitro-2-methylphenol	171.2	330	1316	0	13	32-103	260.4	0	30	JS
4-Bromophenyl phenyl ether	1007	330	1316	0	76.5	60-106	1113	9.97	30	
4-Chloro-3-methylphenol	941.5	330	1316	0	71.5	51-101	1035	9.46	30	
4-Chloroaniline	691.3	660	1316	0	52.5	27-110	813.6	16.3	30	
4-Chlorophenyl phenyl ether	961.2	330	1316	0	73	58-106	1041	8.01	30	
4-Nitroaniline	875.6	1,600	1316	0	66.5	21-100	943.8	0	30	J
4-Nitrophenol	ND	330	1316	0	0	29-120	0	0	30	S
Acenaphthene	994.1	66	1316	0	75.5	55-101	1068	7.12	30	
Acenaphthylene	1067	66	1316	0	81	59-106	1107	3.68	30	
Acetophenone	829.5	330	1316	0	63	51-100	950.3	13.6	30	
Anthracene	974.4	66	1316	0	74	67-105	1081	10.3	30	
Atrazine	1040	330	1316	0	79	45-125	1126	7.93	30	
Benzaldehyde	ND	660	1316	0	0	10-120	403.6	0	30	S
Benzo(a)anthracene	1264	66	1316	199.4	80.9	68-105	1373	8.29	30	
Benzo(a)pyrene	1192	66	1316	173.6	77.3	68-110	1302	8.84	30	
Benzo(b)fluoranthene	1317	66	1316	276.5	79	65-110	1426	7.93	30	
Benzo(g,h,i)perylene	1541	66	1316	77.18	111	60-120	1634	5.87	30	
Benzo(k)fluoranthene	1106	66	1316	109.3	75.7	66-113	1211	9.03	30	
Bis(2-chloroethoxy)methane	849.3	330	1316	0	64.5	53-96	930.8	9.16	30	
Bis(2-chloroethyl)ether	888.8	330	1316	0	67.5	47-108	1087	20.1	30	
Bis(2-chloroisopropyl)ether	862.5	330	1316	0	65.5	47-107	982.9	13.1	30	
Bis(2-ethylhexyl)phthalate	1106	330	1316	0	84	59-117	1198	7.95	30	
Butyl benzyl phthalate	1132	330	1316	0	86	59-106	1204	6.14	30	
Caprolactam	842.7	330	1316	0	64	42-105	956.8	12.7	30	
Carbazole	1027	330	1316	0	78	67-108	1087	5.67	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **163029** Instrument ID **SVMS10** Method: **SW846 8270D**

Chrysene	1211	66	1316	173.6	78.8	68-108	1334	9.66	30	
Dibenzo(a,h)anthracene	1146	66	1316	0	87	62-119	1243	8.18	30	
Dibenzofuran	1040	330	1316	0	79	60-104	1126	7.93	30	
Diethyl phthalate	948.1	330	1316	0	72	62-111	1028	8.14	30	
Dimethyl phthalate	915.1	330	1316	0	69.5	62-106	982.9	7.14	30	
Di-n-butyl phthalate	1047	330	1316	0	79.5	59-105	1126	7.3	30	
Di-n-octyl phthalate	1086	330	1316	0	82.5	51-123	1191	9.21	30	
Fluoranthene	1238	66	1316	289.4	72	67-106	1406	12.7	30	
Fluorene	967.8	66	1316	0	73.5	59-107	1081	11	30	
Hexachlorobenzene	954.6	330	1316	0	72.5	62-103	1035	8.07	30	
Hexachlorobutadiene	961.2	330	1316	0	73	51-94	1009	4.84	30	
Hexachlorocyclopentadiene	289.7	330	1316	0	22	25-120	318.9	0	30	JS
Hexachloroethane	612.3	330	1316	0	46.5	55-93	716	15.6	30	S
Indeno(1,2,3-cd)pyrene	1343	66	1316	141.5	91.3	56-120	1478	9.54	30	
Isophorone	895.4	1,600	1316	0	68	52-99	937.3	0	30	J
Naphthalene	934.9	66	1316	0	71	46-98	995.9	6.32	30	
Nitrobenzene	902	1,600	1316	0	68.5	53-95	976.4	0	30	J
N-Nitrosodi-n-propylamine	816.4	330	1316	0	62	50-104	956.8	15.8	30	
N-Nitrosodiphenylamine	1020	330	1316	0	77.5	63-107	1107	8.09	30	
Pentachlorophenol	401.6	330	1316	0	30.5	34-106	533.8	28.3	30	S
Phenanthrene	1099	66	1316	96.47	76.2	66-101	1224	10.7	30	
Phenol	915.1	330	1316	0	69.5	44-109	1100	18.4	30	
Pyrene	1323	66	1316	276.5	79.5	60-119	1478	11	30	
Surr: 2,4,6-Tribromophenol	*2173*	0	*3292*	0	*66*	*38-92*	2441	*11.6*	*40*	
Surr: 2-Fluorobiphenyl	*2396*	0	*3292*	0	*72.8*	*44-107*	2493	*3.95*	*40*	
Surr: 2-Fluorophenol	*2153*	0	*3292*	0	*65.4*	*37-109*	2467	*13.6*	*40*	
Surr: 4-Terphenyl-d14	*2732*	0	*3292*	0	*83*	*52-123*	2955	*7.84*	*40*	
Surr: Nitrobenzene-d5	*2166*	0	*3292*	0	*65.8*	*41-94*	2298	*5.9*	*40*	
Surr: Phenol-d6	*2140*	0	*3292*	0	*65*	*28-111*	2526	*16.5*	*40*	

The following samples were analyzed in this batch: 20081732-01C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **162977** Instrument ID **VMS11** Method: **SW8260C**

MBLK Sample ID: **MBLK-162977-162977** Units: **µg/Kg-dry** Analysis Date: **8/24/2020 12:38 PM**
Client ID: Run ID: **VMS11_200824A** SeqNo: **6655503** Prep Date: **8/21/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetone	ND	100								
Surr: 1,2-Dichloroethane-d4	*998*	0	*1000*	0	*99.8*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1024*	0	*1000*	0	*102*	*70-130*	0			
Surr: Dibromofluoromethane	*948*	0	*1000*	0	*94.8*	*70-130*	0			
Surr: Toluene-d8	*965.5*	0	*1000*	0	*96.6*	*70-130*	0			

LCS Sample ID: **LCS-162977-162977** Units: **µg/Kg-dry** Analysis Date: **8/24/2020 11:31 AM**
Client ID: Run ID: **VMS11_200824A** SeqNo: **6655502** Prep Date: **8/21/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetone	1096	100	1000	0	110	20-160	0			
Surr: 1,2-Dichloroethane-d4	*1014*	0	*1000*	0	*101*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1006*	0	*1000*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*989*	0	*1000*	0	*98.9*	*70-130*	0			
Surr: Toluene-d8	*981.5*	0	*1000*	0	*98.2*	*70-130*	0			

MS Sample ID: **20081579-01A MS** Units: **µg/Kg-dry** Analysis Date: **8/24/2020 07:45 PM**
Client ID: Run ID: **VMS11_200824A** SeqNo: **6656816** Prep Date: **8/21/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetone	3148	120	1177	39.82	264	20-160	0			S
Surr: 1,2-Dichloroethane-d4	*1219*	0	*1177*	0	*104*	*70-130*	0			
Surr: 4-Bromofluorobenzene	*1184*	0	*1177*	0	*101*	*70-130*	0			
Surr: Dibromofluoromethane	*1188*	0	*1177*	0	*101*	*70-130*	0			
Surr: Toluene-d8	*1119*	0	*1177*	0	*95.1*	*70-130*	0			

MSD Sample ID: **20081579-01A MSD** Units: **µg/Kg-dry** Analysis Date: **8/24/2020 08:07 PM**
Client ID: Run ID: **VMS11_200824A** SeqNo: **6656817** Prep Date: **8/21/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acetone	3234	120	1166	39.82	274	20-160	3148	2.71	30	S
Surr: 1,2-Dichloroethane-d4	*1196*	0	*1166*	0	*103*	*70-130*	1219	*1.86*	*30*	
Surr: 4-Bromofluorobenzene	*1224*	0	*1166*	0	*105*	*70-130*	1184	*3.24*	*30*	
Surr: Dibromofluoromethane	*1149*	0	*1166*	0	*98.5*	*70-130*	1188	*3.35*	*30*	
Surr: Toluene-d8	*1078*	0	*1166*	0	*92.4*	*70-130*	1119	*3.77*	*30*	

The following samples were analyzed in this batch: 20081732-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

MBLK Sample ID: **VBLKS2-200825-R296689** Units: **µg/Kg** Analysis Date: **8/25/2020 01:54 PM**
Client ID: Run ID: **VMS8_200825A** SeqNo: **6658062** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1,2-Trichlorotrifluoroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2-Butanone	ND	10								
2-Methylnaphthalene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Benzene	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	10								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	10								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Cyclohexane	ND	10								
Dibromochloromethane	ND	5.0								
Dichlorodifluoromethane	ND	10								
Ethylbenzene	ND	5.0								
Isopropylbenzene	ND	5.0								
Methyl acetate	ND	10								
Methyl tert-butyl ether	ND	5.0								
Methylcyclohexane	ND	10								
Methylene chloride	ND	10								
Styrene	ND	5.0								
Tetrachloroethene	ND	5.0								
Toluene	ND	5.0								
trans-1,2-Dichloroethene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	5.0					
Surr: 1,2-Dichloroethane-d4	*20.41*	0	*20*	0	*102*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.2*	0	*20*	0	*101*	*83-111*	0
Surr: Dibromofluoromethane	*19.67*	0	*20*	0	*98.4*	*77-125*	0
Surr: Toluene-d8	*20.11*	0	*20*	0	*101*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

LCS	Sample ID: **VLCSS1-200825-R296689**				Units: **µg/Kg**			Analysis Date: **8/25/2020 12:54 PM**			
Client ID:		Run ID: **VMS8_200825A**			SeqNo: **6657723**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	41.43	5.0	40	0	104	73-138	0			
1,1,2,2-Tetrachloroethane	43.57	5.0	40	0	109	71-126	0			
1,1,2-Trichloroethane	40.34	5.0	40	0	101	77-123	0			
1,1-Dichloroethane	39.36	5.0	40	0	98.4	63-148	0			
1,1-Dichloroethene	38.85	5.0	40	0	97.1	67-156	0			
1,2,4-Trichlorobenzene	39.79	5.0	40	0	99.5	70-132	0			
1,2-Dibromo-3-chloropropane	45.07	5.0	40	0	113	48-127	0			
1,2-Dibromoethane	43	5.0	40	0	108	71-144	0			
1,2-Dichlorobenzene	39.84	5.0	40	0	99.6	77-127	0			
1,2-Dichloroethane	42.11	5.0	40	0	105	77-127	0			
1,2-Dichloropropane	39.34	5.0	40	0	98.4	74-130	0			
1,3-Dichlorobenzene	38.91	5.0	40	0	97.3	75-133	0			
1,4-Dichlorobenzene	38.91	5.0	40	0	97.3	74-130	0			
2-Butanone	40.81	10	40	0	102	55-132	0			
4-Methyl-2-pentanone	54.46	5.0	40	0	136	67-159	0			
Benzene	37.35	5.0	40	0	93.4	77-133	0			
Bromodichloromethane	42.39	5.0	40	0	106	69-133	0			
Bromoform	35.3	5.0	40	0	88.2	55-126	0			
Bromomethane	44.75	10	40	0	112	31-174	0			
Carbon disulfide	35.22	5.0	40	0	88	45-160	0			
Carbon tetrachloride	37.73	5.0	40	0	94.3	69-140	0			
Chlorobenzene	38.18	5.0	40	0	95.4	76-130	0			
Chloroethane	35.72	5.0	40	0	89.3	53-150	0			
Chloroform	37.4	5.0	40	0	93.5	72-132	0			
Chloromethane	27.22	10	40	0	68	43-150	0			
cis-1,2-Dichloroethene	40.2	5.0	40	0	100	74-134	0			
cis-1,3-Dichloropropene	42.91	5.0	40	0	107	62-134	0			
Dibromochloromethane	39.95	5.0	40	0	99.9	57-118	0			
Dichlorodifluoromethane	27.8	10	40	0	69.5	43-126	0			
Ethylbenzene	37.64	5.0	40	0	94.1	75-133	0			
Isopropylbenzene	38.21	5.0	40	0	95.5	74-137	0			
Methyl tert-butyl ether	38.69	5.0	40	0	96.7	62-136	0			
Methylene chloride	35.75	10	40	0	89.4	55-157	0			
Styrene	40.37	5.0	40	0	101	72-138	0			
Tetrachloroethene	38.7	5.0	40	0	96.8	70-171	0			
Toluene	39.33	5.0	40	0	98.3	76-130	0			
trans-1,2-Dichloroethene	39.94	5.0	40	0	99.8	65-137	0			
trans-1,3-Dichloropropene	40.27	5.0	40	0	101	58-126	0			
Trichloroethene	39.02	5.0	40	0	97.6	75-135	0			
Trichlorofluoromethane	28.3	5.0	40	0	70.8	62-136	0			
Vinyl chloride	32.11	5.0	40	0	80.3	57-143	0			
Xylenes, Total	113.3	5.0	120	0	94.4	75-132	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

Surr: 1,2-Dichloroethane-d4	*20.52*	0	*20*	0	*103*	*83-132*	0
Surr: 4-Bromofluorobenzene	*19.38*	0	*20*	0	*96.9*	*83-111*	0
Surr: Dibromofluoromethane	*19.81*	0	*20*	0	*99*	*77-125*	0
Surr: Toluene-d8	*19.85*	0	*20*	0	*99.2*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

MS Sample ID: **20081732-01A MS** Units: **µg/Kg** Analysis Date: **8/25/2020 02:44 PM**
Client ID: **Ray 01** Run ID: **VMS8_200825A** SeqNo: **6658524** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	10.9	5.0	20	0	54.5	73-138	0			S
1,1,2,2-Tetrachloroethane	11.49	5.0	20	0	57.4	71-126	0			S
1,1,2-Trichloroethane	10.81	5.0	20	0	54	77-123	0			S
1,1-Dichloroethane	11.31	5.0	20	0	56.6	63-148	0			S
1,1-Dichloroethene	12.27	5.0	20	0	61.4	67-156	0			S
1,2,4-Trichlorobenzene	7.26	5.0	20	0	36.3	70-132	0			S
1,2-Dibromo-3-chloropropane	9.68	5.0	20	0	48.4	48-127	0			
1,2-Dibromoethane	11.06	5.0	20	0	55.3	71-144	0			S
1,2-Dichlorobenzene	8.94	5.0	20	0	44.7	77-127	0			S
1,2-Dichloroethane	11.79	5.0	20	0	59	77-127	0			S
1,2-Dichloropropane	10.89	5.0	20	0	54.4	74-130	0			S
1,3-Dichlorobenzene	8.69	5.0	20	0	43.4	75-133	0			S
1,4-Dichlorobenzene	8.69	5.0	20	0	43.4	74-130	0			S
2-Butanone	20.41	10	20	20.57	-0.792	55-132	0			S
4-Methyl-2-pentanone	14.33	5.0	20	0	71.6	67-159	0			
Benzene	10.29	5.0	20	0	51.4	77-133	0			S
Bromodichloromethane	11.41	5.0	20	0	57	69-133	0			S
Bromoform	8.78	5.0	20	0	43.9	55-126	0			S
Bromomethane	12.22	10	20	0	61.1	31-174	0			
Carbon disulfide	10.97	5.0	20	1.226	48.7	45-160	0			
Carbon tetrachloride	10.11	5.0	20	0	50.6	69-140	0			S
Chlorobenzene	9.75	5.0	20	0	48.8	76-130	0			S
Chloroethane	11.24	5.0	20	0	56.2	53-150	0			
Chloroform	10.91	5.0	20	0	54.6	72-132	0			S
Chloromethane	10.42	10	20	0	52.1	43-150	0			
cis-1,2-Dichloroethene	11.62	5.0	20	0	58.1	74-134	0			S
cis-1,3-Dichloropropene	11.26	5.0	20	0	56.3	62-134	0			S
Dibromochloromethane	10.17	5.0	20	0	50.8	57-118	0			S
Dichlorodifluoromethane	13.09	10	20	0	65.4	43-126	0			
Ethylbenzene	9.95	5.0	20	0	49.8	75-133	0			S
Isopropylbenzene	9.57	5.0	20	0	47.8	74-137	0			S
Methyl tert-butyl ether	11.71	5.0	20	0	58.6	62-136	0			S
Methylene chloride	10.38	10	20	0	51.9	55-157	0			S
Styrene	9.68	5.0	20	0	48.4	72-138	0			S
Tetrachloroethene	10.6	5.0	20	0	53	70-171	0			S
Toluene	10.3	5.0	20	1.367	44.7	76-130	0			S
trans-1,2-Dichloroethene	11.95	5.0	20	0	59.8	65-137	0			S
trans-1,3-Dichloropropene	10.51	5.0	20	0	52.6	58-126	0			S
Trichloroethene	10.4	5.0	20	0	52	75-135	0			S
Trichlorofluoromethane	9.29	5.0	20	0	46.4	62-136	0			S
Vinyl chloride	11.44	5.0	20	0	57.2	57-143	0			
Xylenes, Total	30.2	5.0	60	0	50.3	75-132	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

Surr: 1,2-Dichloroethane-d4	*21.12*	0	*20*	0	*106*	*83-132*	0
Surr: 4-Bromofluorobenzene	*20.36*	0	*20*	0	*102*	*83-111*	0
Surr: Dibromofluoromethane	*20.68*	0	*20*	0	*103*	*77-125*	0
Surr: Toluene-d8	*19.95*	0	*20*	0	*99.8*	*86-108*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

MSD	Sample ID: **20081732-01A MSD**				Units: **µg/Kg**			Analysis Date: **8/25/2020 03:01 PM**			
Client ID: **Ray 01**	Run ID: **VMS8_200825A**				SeqNo: **6658525**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	4.26	5.0	20	0	21.3	73-138	10.9	0	30	JS
1,1,2,2-Tetrachloroethane	3.87	5.0	20	0	19.4	71-126	11.49	0	30	JS
1,1,2-Trichloroethane	4.06	5.0	20	0	20.3	77-123	10.81	0	30	JS
1,1-Dichloroethane	4.5	5.0	20	0	22.5	63-148	11.31	0	30	JS
1,1-Dichloroethene	4.9	5.0	20	0	24.5	67-156	12.27	0	30	JS
1,2,4-Trichlorobenzene	1.81	5.0	20	0	9.05	70-132	7.26	0	30	JS
1,2-Dibromo-3-chloropropane	2.85	5.0	20	0	14.2	48-127	9.68	0	30	JS
1,2-Dibromoethane	3.88	5.0	20	0	19.4	71-144	11.06	0	30	JS
1,2-Dichlorobenzene	2.53	5.0	20	0	12.6	77-127	8.94	0	30	JS
1,2-Dichloroethane	4.76	5.0	20	0	23.8	77-127	11.79	0	30	JS
1,2-Dichloropropane	4.05	5.0	20	0	20.2	74-130	10.89	0	30	JS
1,3-Dichlorobenzene	2.34	5.0	20	0	11.7	75-133	8.69	0	30	JS
1,4-Dichlorobenzene	2.34	5.0	20	0	11.7	74-130	8.69	0	30	JS
2-Butanone	5.95	10	20	20.57	-73.1	55-132	20.41	0	30	JS
4-Methyl-2-pentanone	5.02	5.0	20	0	25.1	67-159	14.33	96.2	30	SR
Benzene	4.04	5.0	20	0	20.2	77-133	10.29	0	30	JS
Bromodichloromethane	4.18	5.0	20	0	20.9	69-133	11.41	0	30	JS
Bromoform	3.35	5.0	20	0	16.8	55-126	8.78	0	30	JS
Bromomethane	4.33	10	20	0	21.6	31-174	12.22	0	30	JS
Carbon disulfide	4.35	5.0	20	1.226	15.6	45-160	10.97	0	30	JS
Carbon tetrachloride	3.73	5.0	20	0	18.6	69-140	10.11	0	30	JS
Chlorobenzene	3.18	5.0	20	0	15.9	76-130	9.75	0	30	JS
Chloroethane	5.49	5.0	20	0	27.4	53-150	11.24	68.7	30	SR
Chloroform	4.24	5.0	20	0	21.2	72-132	10.91	0	30	JS
Chloromethane	4.51	10	20	0	22.6	43-150	10.42	0	30	JS
cis-1,2-Dichloroethene	4.66	5.0	20	0	23.3	74-134	11.62	0	30	JS
cis-1,3-Dichloropropene	3.77	5.0	20	0	18.8	62-134	11.26	0	30	JS
Dibromochloromethane	3.34	5.0	20	0	16.7	57-118	10.17	0	30	JS
Dichlorodifluoromethane	5.38	10	20	0	26.9	43-126	13.09	0	30	JS
Ethylbenzene	3.18	5.0	20	0	15.9	75-133	9.95	0	30	JS
Isopropylbenzene	2.92	5.0	20	0	14.6	74-137	9.57	0	30	JS
Methyl tert-butyl ether	4.66	5.0	20	0	23.3	62-136	11.71	0	30	JS
Methylene chloride	ND	10	20	0	0	55-157	10.38	0	30	S
Styrene	2.85	5.0	20	0	14.2	72-138	9.68	0	30	JS
Tetrachloroethene	3.41	5.0	20	0	17	70-171	10.6	0	30	JS
Toluene	3.39	5.0	20	1.367	10.1	76-130	10.3	0	30	JS
trans-1,2-Dichloroethene	4.72	5.0	20	0	23.6	65-137	11.95	0	30	JS
trans-1,3-Dichloropropene	3.36	5.0	20	0	16.8	58-126	10.51	0	30	JS
Trichloroethene	3.81	5.0	20	0	19	75-135	10.4	0	30	JS
Trichlorofluoromethane	3.64	5.0	20	0	18.2	62-136	9.29	0	30	JS
Vinyl chloride	4.94	5.0	20	0	24.7	57-143	11.44	0	30	JS
Xylenes, Total	9.41	5.0	60	0	15.7	75-132	30.2	105	30	SR

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R296689** Instrument ID **VMS8** Method: **SW8260C**

Surr: 1,2-Dichloroethane-d4	*21.88*	0	*20*	0	*109*	*83-132*	21.12	*3.53*	*30*
Surr: 4-Bromofluorobenzene	*20.21*	0	*20*	0	*101*	*83-111*	20.36	*0.739*	*30*
Surr: Dibromofluoromethane	*20.97*	0	*20*	0	*105*	*77-125*	20.68	*1.39*	*30*
Surr: Toluene-d8	*19.73*	0	*20*	0	*98.6*	*86-108*	19.95	*1.11*	*30*

The following samples were analyzed in this batch: 20081732-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Environmental Quality Management, Inc.
Work Order: 20081732
Project: Oronogo

QC BATCH REPORT

Batch ID: **R296669** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R296669** Units: **% of sample** Analysis Date: **8/24/2020 10:15 AM**
Client ID: Run ID: **MOIST_200824A** SeqNo: **6657131** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.10								

LCS Sample ID: **LCS-R296669** Units: **% of sample** Analysis Date: **8/24/2020 10:15 AM**
Client ID: Run ID: **MOIST_200824A** SeqNo: **6657130** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	99.99	0.10	100	0	100	98-102	0			

DUP Sample ID: **20081822-01B DUP** Units: **% of sample** Analysis Date: **8/24/2020 10:15 AM**
Client ID: Run ID: **MOIST_200824A** SeqNo: **6657117** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	11.39	0.10	0	0	0	0-0	11.45	0.525	10	

DUP Sample ID: **20081822-11B DUP** Units: **% of sample** Analysis Date: **8/24/2020 10:15 AM**
Client ID: Run ID: **MOIST_200824A** SeqNo: **6657128** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	19.98	0.10	0	0	0	0-0	19.65	1.67	10	

The following samples were analyzed in this batch: 20081732-01D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

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COC ID: 223210

ALS Project Manager: | ALS Work Order #: 20681732

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Oronogo	A	Volatiles - EPA 5035/8260
Work Order		Project Number	030319.0001	B	Semivolatiles - EPA 8270
Company Name	Environmental Quality Management, Inc	Bill To Company	Environmental Quality Management, In	C	Pesticides - EPA 8081
Send Report To	adragotta@eqm.com	Invoice Attn	Accounts Payable	D	PCB - EPA 8082
Address	1800 Carillon Blvd	Address	1800 Carillon Blvd	E	Metals - EPA 6010
				F	Herbicides - EPA 8151
City/State/Zip	Cincinnati, OH 45240	City/State/Zip	Cincinnati, OH 45240	G	
Phone	(513) 825-7500	Phone	(513) 825-7500	H	
Fax	(513) 825-7495	Fax	(513) 825-7495	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Bay 01	8/20/2020	8:50	Soil	5,7,8	6	X	X	X	X	X	X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Harlan Smith Harlan Smith

Shipment Method: FedEx

Required Turnaround Time: (Check Box) ☐ Other ☐ Std 10 WK Days ☐ 5 WK Days ☑ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: Harlan Smith	Date: 8/20/2020	Time: 9:45	Received by:	
Relinquished by: FedEx	Date: 8/21/20	Time: 9:30	Received by (Laboratory):	
Logged by (Laboratory): MTG	Date: 8/21/20	Time: 11:54	Checked by (Laboratory):	

Notes:

Cooler ID	Cooler Temp.
	4.6°C
	IR1

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **EQM - CINCINNATI** Date/Time Received: **21-Aug-20 09:30**

Work Order: **20081732** Received by: **MJG**

Checklist completed by Matthew Gaylord (eSignature) 21-Aug-20 (Date) Reviewed by: Bill Carey (eSignature) 24-Aug-20 (Date)

Matrices: Soil

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	4.6/4.6C	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/21/2020 11:55:12 AM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Environmental

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August 28, 2020

Mr. Bill Carey
ALS Environmental-Holland
3352 128th Avenue
Holland, MI 49424

Certificate of Analysis

Project Name:	**2020-HERBICIDES FULL LIST SOIL - RUSH**	Workorder:	**3123523**
Purchase Order:	**20-122019855**	Workorder ID:	**20081732**

Dear Mr. Carey:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, August 25, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Brandon Frye

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3123523 20081732

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3123523001	Ray 01	Solid	8/20/2020 08:50	8/25/2020 09:35	Collected by Client

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SAMPLE SUMMARY

Workorder: 3123523 20081732

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All L brary Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Sp ke
MSD	Matrix Sp ke Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3123523 20081732

Lab ID: **3123523001** Date Collected: 8/20/2020 08:50 Matrix: Solid

Sample ID: **Ray 01** Date Received: 8/25/2020 09:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
HERBICIDES										
2,4-D	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
2,4-DB	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Dalapon	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Dicamba	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Dichloroprop	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Dinoseb	ND		ug/kg	204	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Pentachlorophenol	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
2,4,5-T	ND		ug/kg	204	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
2,4,5-TP	ND		ug/kg	120	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	65		%	36 - 113	SW846 8151A	8/27/20 00:30	S7M	8/28/20 01:42	BS	A
WET CHEMISTRY										
Moisture	18.8		%	0.1	S2540G-11			8/26/20 12:00	DXC	A
Total Solids	81.2		%	0.1	S2540G-11			8/26/20 12:00	DXC	A

Ms. Sarah S Leung
Project Coordinator

ALS Environmental

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3123523 20081732

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3123523001	Ray 01	S2540G-11		
3123523001	Ray 01	SW846 8151A	SW846 8151A	

QUALITY CONTROL DATA

Workorder: 3123523 20081732

QC Batch: EXTR/61612 **Analysis Method:** SW846 8151A

QC Batch Method: SW846 8151A

Associated Lab Samples: 3123523001

METHOD BLANK: 3188332

Parameter	Blank Result	Units	Reporting Limit
2,4-D	ND	ug/kg	100
2,4-DB	ND	ug/kg	100
Dalapon	ND	ug/kg	100
Dicamba	ND	ug/kg	100
Dichloroprop	ND	ug/kg	100
Dinoseb	ND	ug/kg	170
Pentachlorophenol	ND	ug/kg	100
2,4,5-T	ND	ug/kg	170
2,4,5-TP	ND	ug/kg	100
2,4-Dichlorophenylacetic acid (S)	49.3	%	36 - 113

LABORATORY CONTROL SAMPLE: 3188333

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
2,4-D	74.3	ug/kg	333	248	23 - 130
2,4-DB	76.8	ug/kg	333	256	10 - 130
Dalapon	40.4	ug/kg	333	135	24 - 65
Dicamba	64.8	ug/kg	333	216	44 - 89
Dichloroprop	74.8	ug/kg	333	249	36 - 107
Dinoseb	53.4	ug/kg	333	178	25 - 100
Pentachlorophenol	60	ug/kg	333	200	43 - 90
2,4,5-T	59.1	ug/kg	333	197	22 - 132
2,4,5-TP	61	ug/kg	333	203	49 - 105
2,4-Dichlorophenylacetic acid (S)	57	%			36 - 113

MATRIX SPIKE: 3188334 DUPLICATE: 3188335 ORIGINAL: 3123507001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
2,4-Dichlorophenylacetic acid (S)	43.7	%				43.7	39.8	36 - 113		

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QUALITY CONTROL DATA

Workorder: 3123523 20081732

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QUALITY CONTROL DATA

Workorder: 3123523 20081732

QC Batch: WETC/243210 **Analysis Method:** S2540G-11

QC Batch Method: S2540G-11

Associated Lab Samples: 3123523001

SAMPLE DUPLICATE: 3188753 ORIGINAL: 3123474001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	13.6774	%	13.7311	.39	10
Total Solids	86.3225	%	86.2688	.06	5

SAMPLE DUPLICATE: 3188754 ORIGINAL: 3123506002

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	28.3568	%	31.1913	9.52	10
Total Solids	71.6431	%	68.8086	4.04	5

SAMPLE DUPLICATE: 3188755 ORIGINAL: 3123618001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	20.1811	%	21.0344	4.14	10
Total Solids	79.8188	%	78.9655	1.07	5

SAMPLE DUPLICATE: 3188756 ORIGINAL: 3123618013

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Moisture	19.9155	%	14.9369	28.6*	10
Total Solids	80.0844	%	85.063	6.03*	5

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 3123523 20081732

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
3188755	1	Duplicate	S2540G-11	Total Solids

Analyte was analyzed past the 7 day holding time.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3123523 20081732

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3123523001	Ray 01	SW846 8151A	EXTR/61612	SW846 8151A	SVGC/58004
3123523001	Ray 01			S2540G-11	WETC/243210

3123523

CHAIN-OF-CU

* 3 1 2 3 5 2 3 *

: 24-Aug-20
: ID: 14513
Date: ~~25-Aug-20~~
ASAP

ALS Environmental

Subcontractor:
ALS Environmental
301 Fulling Mill Road
Middletown, PA 17057

TEL: (717) 944-5541
FAX: (717) 944-1430
Acct #:

Salesperson: Josh Mckinney

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	20081732	A	Subcontracted Analyses (SUBCONTRACT)
Work Order		Project Number		B	
Company Name	ALS Group USA, Corp	Bill To Company	ALS Group USA, Corp	C	
Send Report To	Bill Carey	Inv Attn	Accounts Payable	D	
Address	3352 128th Ave	Address	3352 128th Ave	E	
				F	
City/State/Zip	Holland, Michigan 49424	City/State/Zip	Holland, Michigan 49424	G	
Phone	(616) 399-6070	Phone	(616) 399-6070	H	
Fax	(616) 399-6185	Fax	(616) 399-6185	I	
eMail Address	bill.carey@alsglobal.com	eMail CC		J	

ALS Sample ID	Client Sample ID	Matrix	Collection Date 24hr	Bottle	A	B	C	D	E	F	G	H	I	J
20081732-01B	Ray 01	Soil	20/Aug/2020 8:50	(1) 4OZGNEAT	X									

Comments:

Please analyze these samples for Herbicides by SW8151 - RUSH TAT please.

8/24/20 1520 Fedex

Relinquished by:	Date/Time	Received by:	Date/Time	Cooler IDs	Report/QC Level
Fedex	8/25/20 935		8/25/20 935	0 294	Std
Relinquished by:	Date/Time	Received by:	Date/Time		

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: ALS Holland | Work Order #: 312353 | Initials: JEC | Date: 8/25/20

1. Were airbills / tracking numbers present and recorded?	NONE	(YES)	NO
Tracking number: 1668 7523 2632			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement? JC 8/25/20		(YES)	(NO)
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		YES	(NO)
5d. Does the COC note the type(s) of preservation for all bottles?		YES	(NO)
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		YES	(NO)
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?[1]	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	(NO)
13a. Are the samples required for SDWA compliance reporting?	(N/A)	YES	NO
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 0°

Thermometer ID: 294

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):

[1]Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

Rev 1/20/2020

SAMPLE ID	LAB ID	METHOD	CAS NUMBER	ANALYTE	MDL	RL	RESULT	UNITS	Table B-1 Lowest Default Target Levels All Soil Types	EPA May/2020 THQ=0.1 Screening Level Residential Soil	Background USGS Newton County (NGS sample C-311257) A-horizon	Background USGS Lawrence County (NGS sample C-311261) A-horizon
Ray 01	20081732-01	SW8260C - VOC_8260_SLL	78-93-3	2-Butanone	0.0066	0.013	0.023	mg/Kg-dry	7.3	2700		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7429-90-5	Aluminum	280	360	4700	mg/Kg-dry	76000	7700		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-36-0	Antimony	0.12	0.45	0.62	mg/Kg-dry	6.7	3.1		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-38-2	Arsenic	0.053	0.45	2.5	mg/Kg-dry	3.9	0.68	7.7	8.9
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-39-3	Barium	0.41	0.45	140	mg/Kg-dry	2000	1500		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	56-55-3	Benzo(a)anthracene	0.0063	0.0073	0.015	mg/Kg-dry	6.1	1.1		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	50-32-8	Benzo(a)pyrene	0.0045	0.0073	0.019	mg/Kg-dry	0.62	0.11		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	205-99-2	Benzo(b)fluoranthene	0.0054	0.0073	0.033	mg/Kg-dry	6.2	1.1		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	191-24-2	Benzo(g,h,i)perylene	0.0056	0.0073	0.010	mg/Kg-dry	1700	11		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	207-08-9	Benzo(k)fluoranthene	0.0055	0.0073	0.011	mg/Kg-dry	62	NS		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-41-7	Beryllium	0.03	0.18	0.58	mg/Kg-dry	0.74	16	1.2	1.2
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-43-9	Cadmium	0.027	0.18	3.6	mg/Kg-dry	9.3	7.8		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-70-2	Calcium	21	45	1700	mg/Kg-dry	N/A	NS	1700	2600
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-47-3	Chromium	0.2	0.45	8.6	mg/Kg-dry	N/A	NS		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	218-01-9	Chrysene	0.0059	0.0073	0.010	mg/Kg-dry	600	110		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-48-4	Cobalt	0.073	0.45	6.4	mg/Kg-dry	N/A	2.3	9.3	20.9
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-50-8	Copper	0.45	0.45	10	mg/Kg-dry	620	310		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	206-44-0	Fluoranthene	0.0035	0.0073	0.013	mg/Kg-dry	2300	310		
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	193-39-5	Indeno(1,2,3-cd)pyrene	0.0051	0.0073	0.016	mg/Kg-dry	3.8	1.1		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7439-89-6	Iron	14	18	6500	mg/Kg-dry	N/A	5500	18100	21900
Ray 01	20081732-01	SW6020B - ICP_6020_S	7439-92-1	Lead	0.21	0.45	87	mg/Kg-dry	3.7	400	27.3	33.6
Ray 01	20081732-01	SW6020B - ICP_6020_S	7439-95-4	Magnesium	12	18	490	mg/Kg-dry	N/A	NS	1200	1600
Ray 01	20081732-01	SW6020B - ICP_6020_S	7439-96-5	Manganese	3.7	4.5	720	mg/Kg-dry	2700	180	697	1390
Ray 01	20081732-01	SW7471B - HG_7471_S	7439-97-6	Mercury	0.024	0.035	0.47	mg/Kg-dry	2.2	1.1		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-02-0	Nickel	0.23	0.45	6.2	mg/Kg-dry	500	150		
Ray 01	20081732-01	SW6020B - ICP_6020_S	9/7/7440	Potassium	7.5	18	470	mg/Kg-dry	N/A	NS	8200	8700
Ray 01	20081732-01	SW846 8270D - SVO_8270_S	129-00-0	Pyrene	0.0013	0.0073	0.011	mg/Kg-dry	1500	NS		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-22-4	Silver	0.059	0.45	0.77	mg/Kg-dry	16	39		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-62-2	Vanadium	0.11	0.45	15	mg/Kg-dry	530	39		
Ray 01	20081732-01	SW6020B - ICP_6020_S	7440-66-6	Zinc	8.7	8.9	510	mg/Kg-dry	7200	2300	31	39

Exceeds MRBCA limit, but less than EPA RSL